

FINAL

ENVIRONMENTAL ASSESSMENT

FOR THE PROPOSED

ARMED FORCES RESERVE CENTER/

ORGANIZATIONAL MAINTENANCE SHOP

AT NELLIS AIR FORCE BASE

AUGUST 1996

NOTE: In late 1995, the 63rd Armed Forces Reserve Command (ARCOM) changed name to the 63rd Regional Support Command (RSC). For the purposes of this document, the titles are used interchangeably.

Report Documentation Page			<i>Form Approved OMB No. 0704-0188</i>					
<p>Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.</p>								
1. REPORT DATE 01 DEC 1996	2. REPORT TYPE N/A	3. DATES COVERED						
<p>4. TITLE AND SUBTITLE Responses to Comments for the Environmental Assessment for the Proposed Armed Forces Reserve Center/Organizational Maintenance Center at Nellis Air Force Base </p>			5a. CONTRACT NUMBER					
			5b. GRANT NUMBER					
			5c. PROGRAM ELEMENT NUMBER					
<p>6. AUTHOR(S)</p>			5d. PROJECT NUMBER					
			5e. TASK NUMBER					
			5f. WORK UNIT NUMBER					
<p>7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Nellis Air Force Base</p>			8. PERFORMING ORGANIZATION REPORT NUMBER					
<p>9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)</p>			10. SPONSOR/MONITOR'S ACRONYM(S)					
			11. SPONSOR/MONITOR'S REPORT NUMBER(S)					
<p>12. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release, distribution unlimited.</p>								
<p>13. SUPPLEMENTARY NOTES The original document contains color images.</p>								
<p>14. ABSTRACT</p>								
<p>15. SUBJECT TERMS</p>								
<p>16. SECURITY CLASSIFICATION OF:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33.33%; padding: 2px;">a. REPORT unclassified</td> <td style="width: 33.33%; padding: 2px;">b. ABSTRACT unclassified</td> <td style="width: 33.33%; padding: 2px;">c. THIS PAGE unclassified</td> </tr> </table>			a. REPORT unclassified	b. ABSTRACT unclassified	c. THIS PAGE unclassified	<p>17. LIMITATION OF ABSTRACT UU</p>	<p>18. NUMBER OF PAGES 105</p>	<p>19a. NAME OF RESPONSIBLE PERSON</p>
a. REPORT unclassified	b. ABSTRACT unclassified	c. THIS PAGE unclassified						

Executive Summary

The U. S. Army Reserve, in conjunction with the U.S. Navy Reserve and the U.S. Marine Corps. Reserve, propose to construct and maintain an Armed Forces Reserve Center/Organizational Maintenance Shop (AFRC/OMS) facility on Nellis Air Force Base (AFB) property near Las Vegas, Nevada. Construction is proposed to start in fiscal year 1996 and to be completed in fiscal year 1997.

The current AFRC facilities, under the direction of the 63rd Armed Forces Reserve Command (ARCOM) has outgrown their existing facilities within the Las Vegas city limits, and cannot expand to meet current or future training and operational requirements for its 700 member contingent. This is due to a lack of suitable available real estate at this location. Nellis AFB has tentatively agreed to citing the proposed AFRC/OMS facility in Area III of Nellis AFB.

Four alternatives are presented for the planned AFRC/OMS project: the proposed action to construct a new AFRC/OMS facility on 16.5-acres of land at the intersection of Range Road and DRMO Road; construct a similar facility on a smaller (10-acre) parcel of land at the same intersection; construction of a new 16.5-acre facility spanning DRMO Road on the west side of Range Road, or no action.

The proposed action is to construct a new 16.5-acre facility, triangular in shape, at the intersection of Range Road and DRMO Road in Area III of Nellis AFB. The site would consist of three permanent structures: a 68,616 square ft (SF) training facility a 1,052 SF unheated storage facility, and a 14,775 SF maintenance facility. Additional site improvements would include a paved parking area of 15,607 square yards (SY) in the rear of the site for the AFRC contingent of heavy vehicles and equipment and a 9,142 SQ area for privately owned vehicles (POV).

Alternative No. 1 to the proposed action would be to construct a smaller facility at the same

intersection of Range Road and DRMO Road, compressing all operations into a 10-acre parcel. Buildings and parking areas would be similar in size to the proposed action. Selection of this alternative would require the relocation of two domestic water pipelines and pipeline easements crossing the ten acre parcel. This would require additional subsurface disturbance to the area and increase short term fugitive dust emissions in the area.

Alternative No. 2 would move the Organizational Maintenance Shop (OMS) and heavy equipment parking north of DRMO Road, further away from the Caffarelli Court and Family Campground area. All structures, parking, and open space would be the same as the proposed action. Table ES-J presents a comparison of impacts for each alternative.

The no action alternative would continue Reservist activities at their current operating location in downtown Las Vegas. This alternative would negatively impact the Reserves ability to meet their specific missions of providing well trained personnel for service in the event of war or national disaster and would continue to contribute to the increased traffic congestion in the downtown Las Vegas area. The following table further illustrates the impacts of each alternative considered in the development of the proposed project.

Table ES-1
Summary and Comparison of Impacts of the Proposed Action and Alternatives

Issues	Proposed Site	Alternative # 1	Alternative # 2	No Action
Air Quality	<p>Short-term - increase in PM₁₀ (15 tons) and CO (0.66Tons) emissions. The PM₁₀ emissions would be reduced by 50 percent by watering twice daily. CO emissions would be reduced by limiting vehicle idle to less than 3 minutes. Emissions are at <i>de minimus</i> levels.</p> <p>Long-term - HETs exceed EPA Standards for PM₁₀ and NO_x. The Department of the Army (DA) has a Memorandum of Understanding (MOU) (Oct88) exempting vehicles.</p>	<p>Short-term - increase in PM₁₀ (10 Tons) and CO (.50 Tons) emissions. The PM₁₀ emissions would be reduced by 50 percent by watering twice daily. CO emissions would be reduced by limiting vehicle idle to less than 3 minutes. Emissions are at <i>de minimus</i> levels.</p> <p>Long-term - HETs exceed EPA Standards for PM₁₀ and NO_x. The DA has a MOU (Oct88) exempting vehicle.</p>	<p>Short-term - increase in PM₁₀ (15 Tons) and CO (0.66 Tons) emissions. The PM₁₀ emissions would be reduced by 50 percent by watering twice daily. CO emissions would be reduced by limiting vehicle idle to less than 3 minutes. Emissions are at <i>de minimus</i> levels.</p> <p>Long-term - HETs exceed EPA Standards for PM₁₀ and NO_x. The DA has MOU (Oct88) exempting vehicles.</p>	No Impact
Noise	<p>Short-term - construction would be temporary (less than 6 months) and during week-day daylight hours.</p> <p>Long-term - Operations of the HET vehicles in expected numbers would violate local noise ordinances for land use. A noise wall would be required to reduce noise impact to Caffarelli Court to less than 55 dBA.</p>	<p>Short-term - construction would be temporary (less than 6 months) and during week-day daylight hours.</p> <p>Long-term - Operations of the HET vehicles in expected numbers would violate local noise ordinances for land use. A noise wall would be required to reduce noise impact to Caffarelli Court to less than 55 dBA.</p>	<p>Short-term - construction would be temporary (less than 6 months) and during week-day daylight hours.</p> <p>Long-term - Operation of the HET vehicles in expected numbers would violate local noise ordinances at fence line. Impact to Caffarelli Court would be reduced significantly .</p>	No Impact

Water Use	Short-term- use of water for dust control and by construction workers provided by sub-contractor Long-term - Full-time staff -136,000 Gal/Mo. Reservists - 313,600 Gal/2-week period- No significant impact.	Short-term - use of water for dust control and by construction workers provided by sub-contractor. Long-term - Full-time staff- 136,000 Gal/Mo. Reservists- 313,600 Gal/2- week period - No significant impact.	Short-term - use of water for dust control and by construction workers provided by sub-contractor. Long-term -Full-time staff- 136,000 Gal/Mo. Reservists - 313,600 Gal/2- week period - No significant impact.	No Impact
Biology	No Impact	No Impact	No Impact	No Impact
Land Use	Residential/Recreational/Industrial Short-term - Temporary increase in construction personnel Long-term - Potential conflict with Base Comprehensive Plan	Residential/Recreational/Industrial Short-term - Temporary increase in construction personnel. Long-term - Less impact than the proposed action but still inconsistent with Base Comprehensive Plan.	Residential/Recreational/Industrial. Short-term - Temporary increase in construction personnel Long-term - Acceptable use of Base property.	Residential/Commercial
Cultural Resources	No Impact	No Impact	No Impact	No Impact
Hazardous Materials Management	Short-term - No impact Long-term - HAZMART use required- No impact	Short-term - No impact Long-term - HAZMART use required. No impact	Short-term - No impact Long-term - HAZMART use required-No impact	No Impact
Hazardous Waste Mgmt	Short-term - No significant impact Long-term - RCRA Part B- Estimated less than 100 gallons/quarter of used oil. No impact	Short-term - No significant impact Long-term - RCRA Part B- Estimated less than 100 gallons/quarter of used oil. No impact.	Short-term - No significant impact Long-term - RCRA Part B- Estimated less than 100 gallons/quarter of used oil. No impact	No Impact
Solid Waste Management	Little solid waste. Uses existing Base contractors. No impact	Little solid waste. Uses existing Base contractors. No impact.	Little solid waste. Uses existing Base contractors. No impact.	No Impact

TABLE OF CONTENTS

INTRODUCTION

PURPOSE OF AND NEED FOR ACTION

Background	3
.2 Need for the Proposed Action	
.3 Decision to be Made	
1.4 Environmental Issues and Scope of Analysis	
.5 Authorizing Action	

DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

2.1 Proposed Action	
2.2 Alternatives to the Proposed Action	23
.2. Alternative No	
Alternatives	
.2. Alternative No	23
.3 No Action	2
2.3 Comparison of Proposed Action and Alternatives	26

.0 DESCRIPTION OF THE EXISTING ENVIRONMENT

Air Quality	34
3.2 Noise	36
.3 Water	39
Surface Water	
Groundwater	43

3.3.3 Water Use	46
Waste water	47
3.4 Biology	47
3.5 Land Use	51
3.6 Traffic.....	52
3.7 Cultural Resources.....	53
3.8 Hazardous Materials Management	55
3.9 Hazardous Waste Management	55
4.0 ENVIRONMENTAL CONSEQUENCES	56
4.1 Proposed Action	56
4.1.1 Air Quality	56
Noise	62
Water	67
4.1.4 Biology	70
4.1.5 Land Use.....	71
4.1.6 Traffic.....	71
Cultural Resources	72
Hazardous Materials Management	73
4.1.9 Hazardous Waste Management	75
4.2 Alternative No. 1	76
Air Quality	76
Noise	77

Water	78
Biology	79
Land Use	79
Traffic	79
Cultural Resources	80
Hazardous Materials Management	80
Hazardous Waste Management	80
4.3 Alternative No. 2	81
4.3.1 Air Quality	81
4.3.2 Noise	82
Water	83
Biology	84
Land Use	84
4.3.6 Traffic	85
4.3.7 Cultural Resources	85
Hazardous Materials Management	85
Hazardous Waste Management	86
4.4 No Action	86
Air Quality	86
Noise	87
Water	87
Biology	88

Land Use	88
Traffic	88
Cultural Resources	88
Hazardous Materials Management	88
Hazardous Waste Management	89
5.0 CONSULTATION AND COORDINATION	90
6.0 LIST OF PREPARERS	91
7.0 REFERENCES	92

LIST OF FIGURES

Figure	Title	Page
1-1	General Location of Ryland C. Taylor AFRC/OMS Facility Area	5
1-2	Composition of Buildings on Block with AFRC/OMS Facility	6
1-3	General Area Map	7
1-4	Nellis AFB Site Map	9
	Project Study Area	12
	Heavy Equipment Transporter	16
2-3	Proposed Action Site Conceptual Design	20
	Proposed Site, Current Condition	21
	Alternative No. 1 Site Conceptual Design	25
	Alternative No. 2	27
	Major Geologic Features	33
	Eighteen Year History of CO Emissions	37
	Five Year History of PM ₁₀ Emissions	38
	Existing Nellis AFB Noise Zones	40
	Surface Water Drainage	44
	Water Well Location	45
	Existing Site Debris	49

LIST OF TABLES

	Title	Page
	U. S. Army Reserve Equipment Allowance	13
	U. S. Marine Corps Equipment Allowance List	18
2-3	AFRC/OMS Staffing	22
	Site Selection Criteria	24
	Summary and Comparison of Impacts of the Proposed Action and Alternatives	29
3-1	Clark County Noise Ordinance Standards	41
	Intensity of Various Sounds	42
4-1	AFRC/OMS Reserve Staff Mileage	61
4-2	Detroit Diesel 8V-92TA Engine Emissions	63
4-3	Hazardous and Controlled Materials	74

INTRODUCTION

In the spring of 1993, representatives from the United States (U.S.) Army approached Nellis Air Force Base (AFB) about the potential for constructing an Armed Forces Reserve Center and Organizational Maintenance Shop (AFRC/OMS) at Nellis AFB, near Las Vegas, Nevada. The existing Reserve facilities, located at the southeastern edge of the Las Vegas city limits, were built for the U.S. Army, the U.S. Navy, and the U.S. Marine Corps Reserves in the early 1960s. It is overcrowded and cannot meet operational requirements. The lack of sufficient, suitable real estate for expansion in the nearby area further contributes to the overcrowded condition.

Discussions with Nellis AFB have identified a proposed construction site for the AFRC/OMS facility and two possible action alternatives on Base property. A 16.5-acre parcel has been identified as a potential site in Area III of Nellis AFB that would satisfy the needs of the proposed facility. The planned facility would serve as the base of operations for approximately 700 Reservists and consist of three permanent buildings and parking for personnel and military vehicles. The purpose of the proposed action is to construct a new AFRC/OMS that would fulfill the operational maintenance and training needs of the three Reserve organizations and allow each Branch of the military to fulfill their mission objectives of providing well trained personnel for rapid deployment in the event of war or national emergency. If approved, construction would be expected to start on the proposed facility in fiscal year 1996 and be completed in fiscal year 1997. This environmental assessment (EA) evaluates the impacts of the proposed AFRC/OMS facility, two action alternative sites, and no action.

The proposed project has the potential to impact air quality, noise, water resources (water usage and surface water discharge), biological resources, land use, traffic, cultural resources, and hazardous waste. Resources that are not expected to be impacted are: floodplains, grazing, minerals, and socioeconomic. Because these latter resources are not

expected to be impacted, they are not discussed in the EA.

1.0 PURPOSE OF AND NEED FOR ACTION

The U.S. Army Reserve, in conjunction with the U.S. Navy Reserve and the U.S. Marine Corps Reserve, propose to construct and maintain an Armed Forces Reserve Center/Organizational Maintenance Shop (AFRC/OMS) on Nellis Air Force Base (AFB) property. Construction is proposed to start in fiscal year 1996 and to be completed in fiscal year 1997.

This environmental assessment (EA) was prepared in compliance with the National Environmental Policy Act (NEPA) of 1969 (Public Law 91-190), and the implementing regulations of the President's Council on Environmental Quality (CEQ) (40 CFR Parts 1500 through 1508), which require Federal agencies to analyze the potential environmental impacts of their proposed actions and alternatives to these actions. Air Force Instruction (AFI) 32-7061 implements NEPA and CEQ regulations for the Air Force. Details of the environmental regulations guiding the Air Force's preparation of NEPA documents are presented in 32 CFR (Chapter VII) Part 989. Further, the U. S. Air Force "Handbook to Environmental Quality" provides guidance in achieving Air Force environmental goals. Army Regulations on the Environmental Effects of Army Actions (AR200-1 and AR200-2) and Navy/Marine Corps "Procedures for Implementing the National Environmental Policy Act", 32 CFR (Chapter VII) Part 775, were all considered in the preparation of this EA. As a general rule, since the proposed facility would be located on Air Force property, Air Force environmental regulations would be in effect. The exception to this rule is if the other service Branches impose more stringent environmental control regulations; in which case, their regulations would take precedence. The individual services Branches will be responsible for compliance with all permits and licenses issued in their names.

1.1 Background

The U.S. Army Reserve, the U.S. Navy Reserve, and the U.S. Marine Corps Reserve, under the direction of the 63rd Regional Support Command (RSC), currently

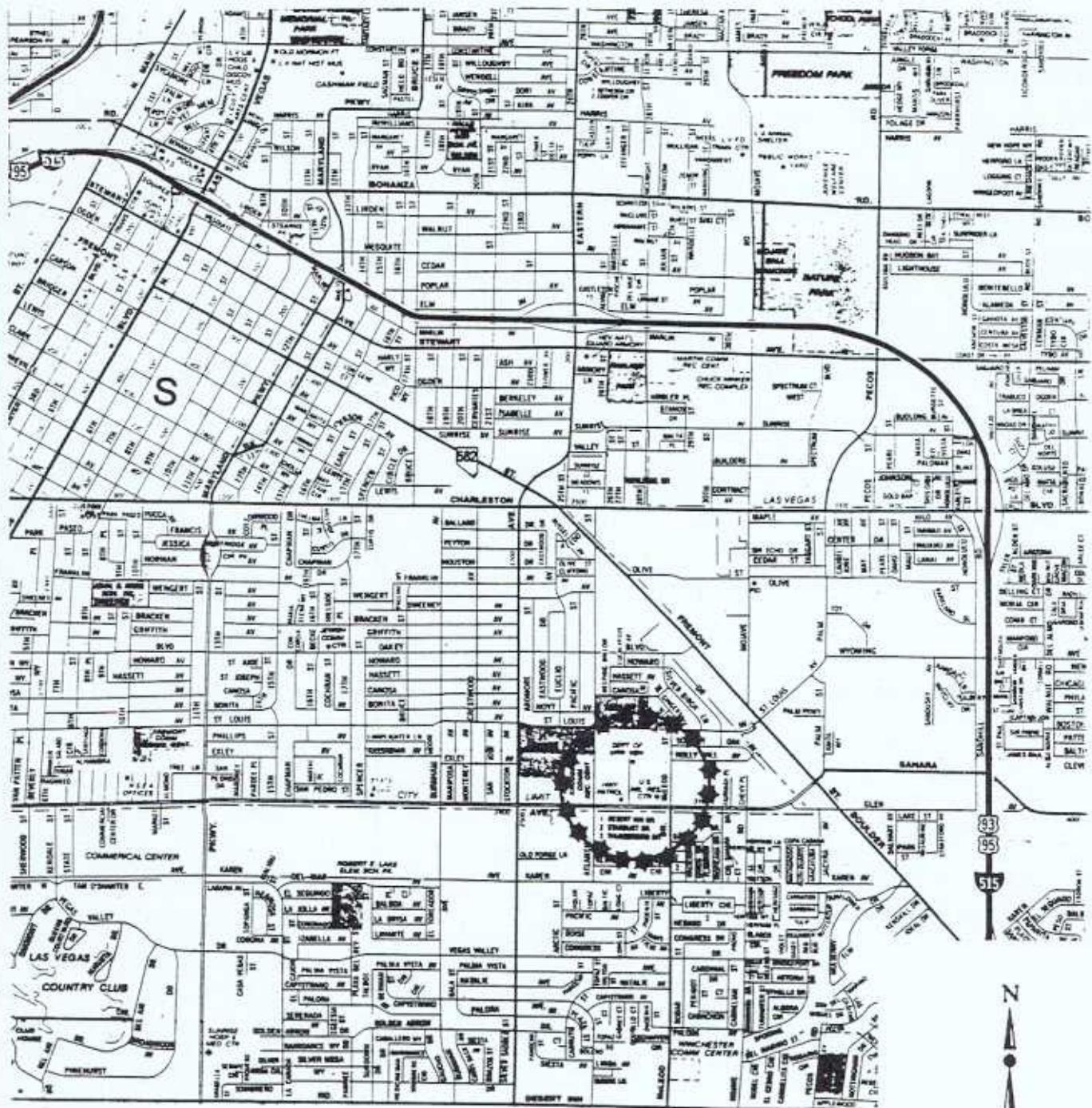
conduct military reserve activities at their existing facility at the southeastern edge of the Las Vegas, Nevada, city limits. As illustrated in figure 1-1, the Ryland G. Taylor AFRC/OMS facility is located on Sahara Avenue, one of the busiest east-west arterial roads in the Las Vegas area. The facility is overcrowded, outdated, and cannot meet the current or future training and operational requirements of the three military Branches.

The existing AFRC Reserve facilities are aging and in need of significant improvements, are inadequate to meet the proposed mission of the 63rd ARCOM, and lack sufficient space to store the number of Heavy Equipment Transport (HET) vehicles planned for the facility. Undeveloped land does exist to the north of the existing AFRC site, but the area is surrounded by single family residences on the north and east sides. Two parks (Miller Park and Jaycee Park) are also in the immediate area. Figure 1-2 illustrates the composition of buildings on the same block as the existing AFRC facility. In addition to the buildings illustrated on figure 1-2, the state of Nevada Bradley Building is located on the southwest corner of the block. Also, the State of Nevada, Department of Agriculture, Weights and Measures Division occupies facilities on the same block, along McLeod St. The remainder of Sahara Avenue in the general area of the AFRC/OMS facility is comprised of retail shopping and automotive dealerships.

The Army Reserve approached Nellis AFB about the possibilities of constructing a new AFRC/OMS on Nellis AFB property. Nellis AFB personnel agreed to the potential of locating the AFRC/OMS facility on Nellis AFB property, thus creating the foundation and need for the preparation of this EA.

Nellis AFB is located in the Great Basin area of Southwestern Nevada, approximately 10 miles northwest of Lake Mead. The city of Las Vegas lies approximately 8 miles southwest of the Base, with the city of North Las Vegas lying between the Base and Las Vegas. Figure 1-3 shows the general location of Nellis AFB.

Nellis AFB land holdings consist of approximately 18 square miles subdivided into three



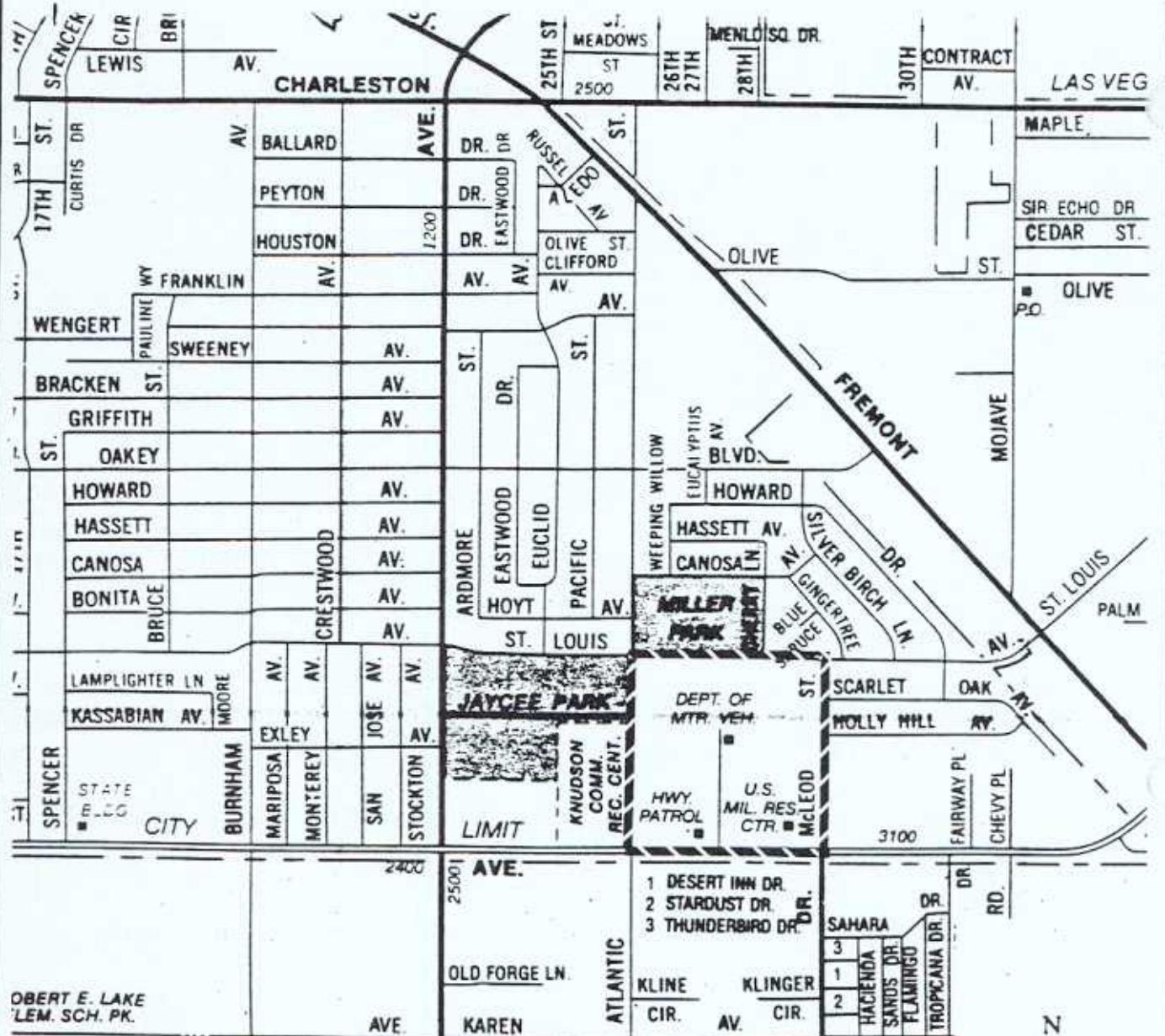
★ Existing AFRC/OMS Facilities Area

U.S. ARMED FORCES RESERVE CENTER Nellis AFB, Las Vegas, Nevada

Prepared for: 63rd ARCOM



Figure 1-1, General Location of Ryland G. Taylor AFRC/OMS Facility



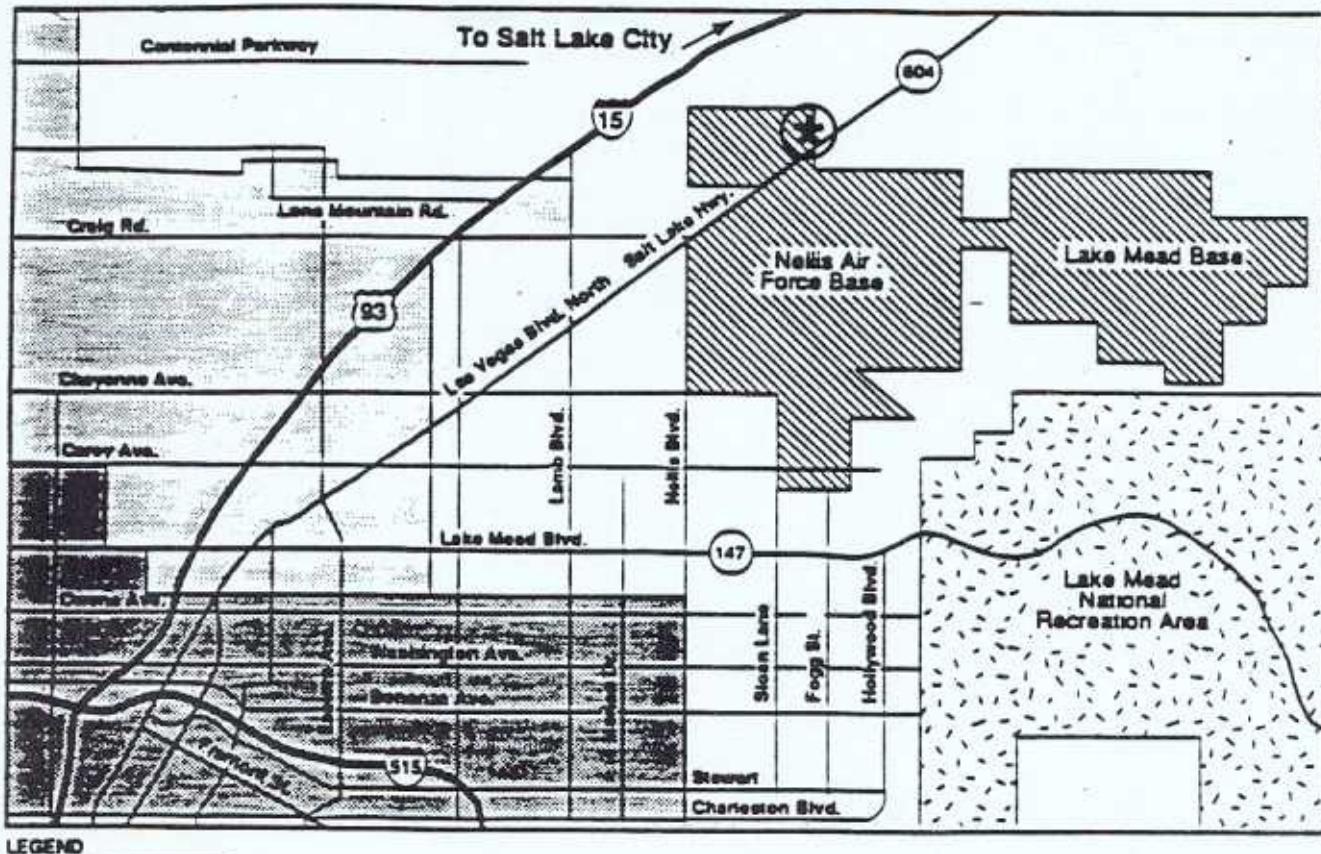
Existing AFRC/OMS Facilities Area

U.S. ARMED FORCES RESERVE CENTER Nellis AFB, Las Vegas, Nevada

Prepared for: 63rd ARCOM

Figure 1-2, Composition of Buildings on Block with AFRC/OMS Facility





LEGEND

- North Las Vegas
- Las Vegas
- Project Study Area

N

Map Not to Scale

Location Map



Vicinity Map

U.S. ARMED FORCES RESERVE CENTER Nellis AFB, Las Vegas, Nevada

Prepared for: 63rd ARCOM

Figure 1-3, General Area Map

distinct areas. Area I, the Nellis Main Base; Area II, the Munitions Area,; and Area III, which consists of housing, recreation, tank farms, and other military operations. The proposed action and the alternatives evaluated are all located in Area III, within the boundaries of Section 33, Township 19 South, Range 62 East. Figure 1-4 identifies the specific location of Area III.

1.2 Need for the Proposed Action

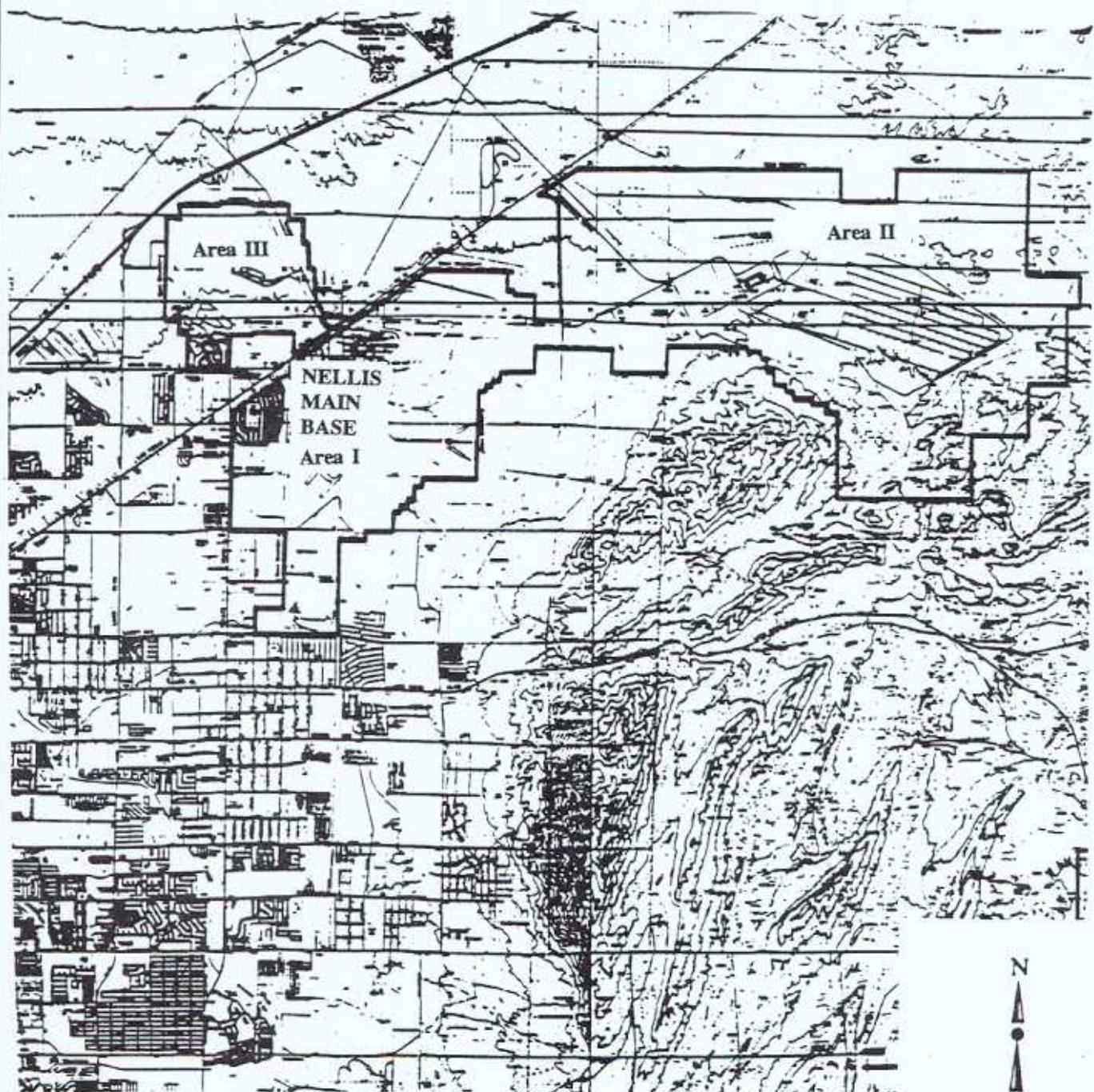
The proposed AFRC/OMS facility would provide the 63rd ARCOM, Navy, and Marines with sufficient space and facilities to administer Reserve activities, conduct training, and provide individual/unit storage for equipment and stores to support a 700 member Reserve contingent. The facility would eliminate overcrowding at the current Taylor facility and reduce weekend traffic congestion on a busy section of Sahara Avenue. Recorded traffic volumes on Sahara Avenue to the west of the existing site indicate an annual average daily traffic count of 52,800 vehicles in 1993 (NDOT, 1993)

1.3 Decision to be Made

Three action alternatives were examined as potential alternatives for the new facilities. The decision to be made is whether to (1) construct and operate a new Reserve facility of approximately 16.5-acres at the proposed site, south of DRMO Road, (2) construct and operate a smaller facility in the same area consisting of only 10 acres, (3) construct and operate a new Reserve facility of approximately 16.5-acres spanning both sides of DRMO Road, or (4) take no action.

1.4 Environmental Issues and Scope of Analysis

This EA examines the potential consequences of constructing a new AFRC/OMS facility on Nellis AFB property in an unincorporated portion of Clark County, Nevada. The potential impacts to air quality, noise, water resources, biological resources, land use, traffic,



U.S. ARMED FORCES RESERVE CENTER
Nellis AFB, Las Vegas, Nevada

Prepared for: 63rd ARCOM

Figure 1-4, Nellis AFB Site Map

cultural resources, and hazardous wastes are evaluated under each action alternative. The impacts of taking no action are also reviewed as a part of this EA.

Several resource types would not be impacted as part of the proposed action or no action alternative. These resources are wetlands, floodplains, grazing, minerals, and socioeconomic.

1.5 Authorizing Actions

Compliance with the regulatory requirements for the construction and operation of the AFRC/OMS facility is a combined effort of Nellis AFB, the U.S. Army Corps of Engineers, and the Armed Forces Reserve Command. A final decision on the need for specific permits would be based on consultation with each responsible regulatory agency or permitting agency.

2.0 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

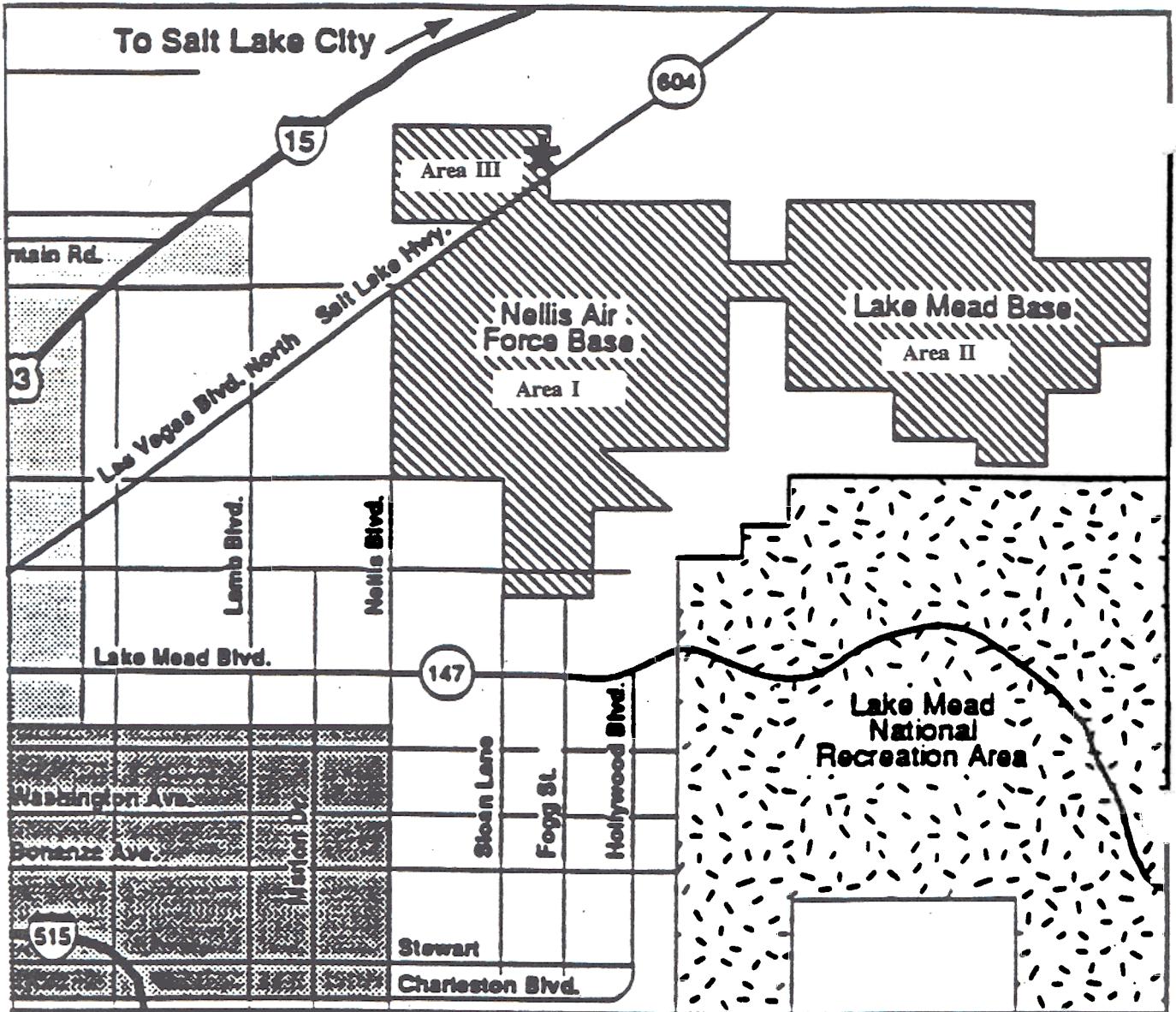
Proposed Action

The United States Army Reserve, in conjunction with the U.S. Navy Reserve, and the U.S. Marine Corps Reserve, proposes to construct and operate a combined AFRC/OMS training facility at Nellis AFB, Las Vegas, Nevada. The entire facility would be built on a 16.5-acre site at the intersection of Range Road and DRMO Road. This parcel is roughly triangular in shape with a 1600-foot frontage along Range Road and a 1200-foot frontage along DRMO Road. Figure 2-1 illustrates the location of the project.

Three distinct Armed Forces Reserve organizations would occupy the AFRC/OMS facility; the Army Reserves, the Navy Reserves, and the Marine Corps Reserves. The single largest user, both in terms of personnel and space, would be the U.S. Army's 257th Transport Company. This Company maintains and stores vehicles for the transport of tanks and other pieces of large equipment. Table 2-1 provides the equipment allowance list for the Las Vegas unit.

Two Army Reserve Units are the U.S. Army's contingent of the AFRC/OMS. The U.S. Army mission requirements dictate the minimum space requirements for a new AFRC/OMS facility. The primary vehicles driving the space requirements are the Army's Heavy Equipment Transporter (HET) vehicles and trailers utilized for hauling the M1A1 main battle tank. Figure 2-2 illustrates the vehicle package. The overall size of the HET vehicle and trailer as a unit is 82 feet long by 8.5 feet wide. These dimensions are with the HET's side-view mirrors collapsed. Extension of the mirrors adds approximately four feet to the width of the vehicle.

The U.S. Navy plans to relocate six U.S. Navy Reserve units to the AFRC/OMS facility. The Naval units are the: 1) Shore Intermediate Maintenance Activity, San Diego; 2) Forth Marine Division 2/23 Detachment F.; 3) Naval Hospital, Camp Pendleton D519; 4)



Location Map



Las Vegas

Vicinity Map

U.S. ARMED FORCES RESERVE CENTER Nellis AFB, Las Vegas, Nevada

Prepared for: 63rd ARCOM

Figure 2-1, Project Study Area

Table 2-1
U.S. Army Reserve Equipment Allowance

Description	Requisition	Authorized
Charger Radiac Detect	5	5
Compressor Unit	1	1
Electric Transfer Keying	5	5
Generator Set: DED Skid Mounted	1	1
Generator Set: DED Skid Mounted	1	1
Generator Set: DED Skid Mounted	1	1
Generator Set: DED Skid Mounted	1	1
Generator Set: DED Skid Mounted	1	1
Generator Set, Diesel Engine	1	1
Installation Kit, MK	4	4
Installation Kit, MK-1967	1	1
Installation Kit, MK-	10	10
Installation Kit, MK-	1	1
Installation Kit, MK-2146	5	5
Installation Kit, MK-2147	11	11
Installation Kit, MK-2148	28	28
Heater, duct type PTB	4	4
Hose Assembly, Nonmet	16	16
Installation Kit, MK-1443	29	29
Kitchen Field Trailer	1	1
Launcher, Grenade	4	4
Light Set	1	1
Machine Gun caliber	12	12
Machine Gun 7.52 mill	4	4
Mask CBR, Protective	299	253
Multimeter Digital	12	12
Mount Tripod Machine	12	12
Mount Tripod Machine	4	4
Mounter and Demountor	4	4
Net Control Device	1	1
Night Vision Sight CR	6	6
Night Vision Sight IN	2	2
Night Vision Goggle	239	239
Power Supply	1	1
Pistol 9mm Automatic	1	1

Table 2-1 (Cont.)
U. S. Army Reserve Equipment Allowance

Description	Requisition	Authorized
Radiometer	16	16
Radio Set	43	43
Radio Set	1	1
Radio Set Control Grd	1	1
Range Outfit Field	2	2
Radiac Set	6	6
Radiac Set	1	1
Reeling machine Cable	1	1
Reeling machine Cable	11	11
Radio Test Set	1	1
Rifle 5.56 mm	298	252
Speech Security Equipment	45	45
Shop Set	4	4
Sanitation Center	1	1
Semi Trailer Flatbed	2	2
Semi Trailer Van	1	1
Shop Equipment	1	1
Tone Signalling Adapter	1	1
Tool Outfit Hydraulic	1	1
Telephone wire	2	2
Shop Set Spare Parts	2	2
Shop Set Spare Parts	1	1
Tape Reader General	1	1
Telephone Digital	2	2
Truck Utility Cargo	11	11
Truck Wrecker	4	4
Truck Tank Fuel	4	4
Switchboard Telephone	1	1
Telephone Set, TA-312	10	10
Tent, Frame Type	4	4
Power Supply Vehicle	45	45
Tool Kit, Automotive	1	1
Tool Kit, General Mechanical	7	7
Tool Kit, General Mechanical	29	29
Tool Kit, Carpenters	1	1

Table 2-1 (Cont.)
U.S. Army Reserve Equipment Allowance

Description	Requisition	Authorization
Tool Kit, Electric	1	1
Weld Shop Trailer	1	1
Tool Kit, Small Arms	1	1
Tool Kit, Welder	2	2
Wireline Adapter	2	2
Torch Outfit, Cutting	1	1
Towbar Motor Vehicle	12	12
Trailer Cargo	2	2
Trailer Cargo	5	5
Trailer Tank Water	2	2
Truck Cargo	4	4
Truck Cargo	1	1
Truck Cargo	2	2
Truck Tractor	2	2
Truck Van Expandible	1	1
Truck Van Shop	1	1
Watch Wrist	29	24
Wrench Impact	1	1
Wrench Set Socket	1	1
Semitrailer Lowbed	96	96
Tent, Extendible	1	1
Truck Tractor Heavy	96	96

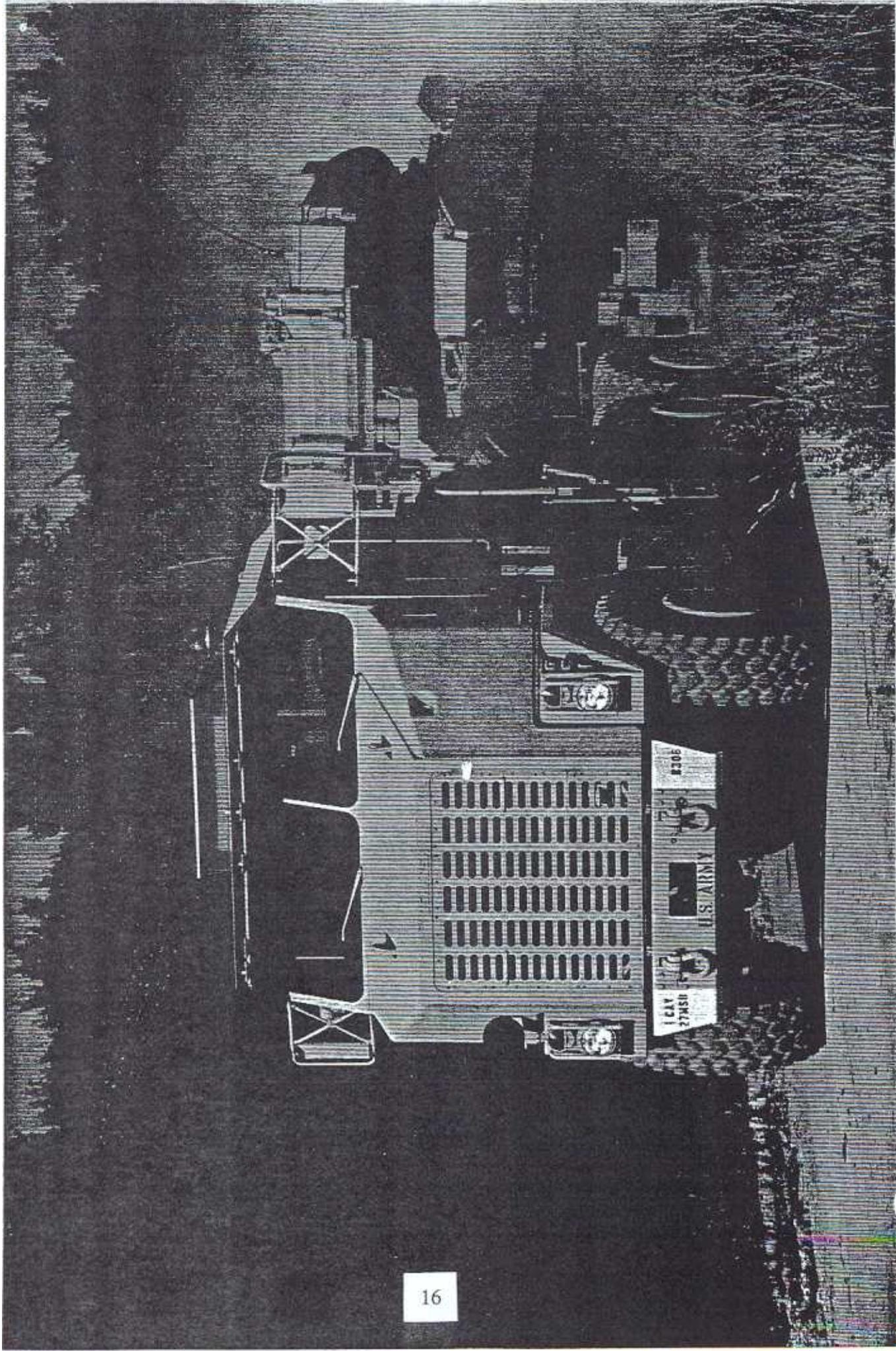


Figure 2-2 Heavy Equipment Transporter

Naval Hospital, Camp Pendleton P1917; 5) Administration NMCB, Detachment 0817; and 6) the Voluntary Training Unit 1903 G. The Navy's mission is to provide trained units and qualified personnel for active duty in the event of war or national disaster when authorized by law. Specific functions: to command and train assigned Naval Reserve forces; to ensure maximum readiness of Reservists in anticipation of rapid mobilization in the event of war or national emergency; and to serve as field manager for the Commander of Naval Reserve Readiness Command, Region 20, for assigned facilities, equipment and manpower resources. All units are currently operating out of the existing AFRC center in southeast Las Vegas.

The U. S. Marine Corps would locate two Marine Corps Reserve units in the proposed AFRC/OMS facility. The Marine Corps Reserve units would consist of relocating the existing Infantry unit from the Taylor AFRC/OMS facility and creating a new Motor Transport Unit. The new Motor Transport unit would be for the western United States, established from components of existing Motor Transport units in the eastern U. S. Its purpose is to provide motor transport and maintenance training in support of the Marine Corps Twentynine Palms operations. Table 2-2 identifies the type of equipment that typically would be found in a Motor Transport unit.

The proposed AFRC/OMS facility would include administrative areas, classrooms, library, learning center, assembly hall, arms vaults, woodworking shop, kitchen, medical examination rooms, medical storage, physical readiness area, locker rooms, individual/unit storage functions, vehicle repair bays, military equipment parking (MEP), and privately owned vehicle (POV) parking. The facility layout would be designed to maximize the existing project site contour by utilizing portions of the already excavated areas for retention ponds, while, at the same time, avoiding the existing water pipelines crossing the property. The Reserve center is sized to train approximately 700 Reserve members. A full-time staff of approximately 45 people would operate the facility during normal business hours.

Table 2-2
U.S. Marine Corps. Equipment Allowance List

Description	Quantity
Hummer Motor Vehicles	7
Sixcon Fuel Pumps	2
Sixcon Fuel Tanks (600gal.)	4
DCC 353 Welder	1
MK48 Diesel Power Units	8
Assorted Trailers for Power Units	8
5-Ton Diesel Trucks	7
Water Trailer (400 gal.)	1
2-1/2 Ton Trailers	2

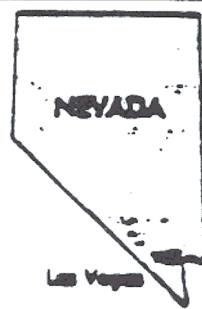
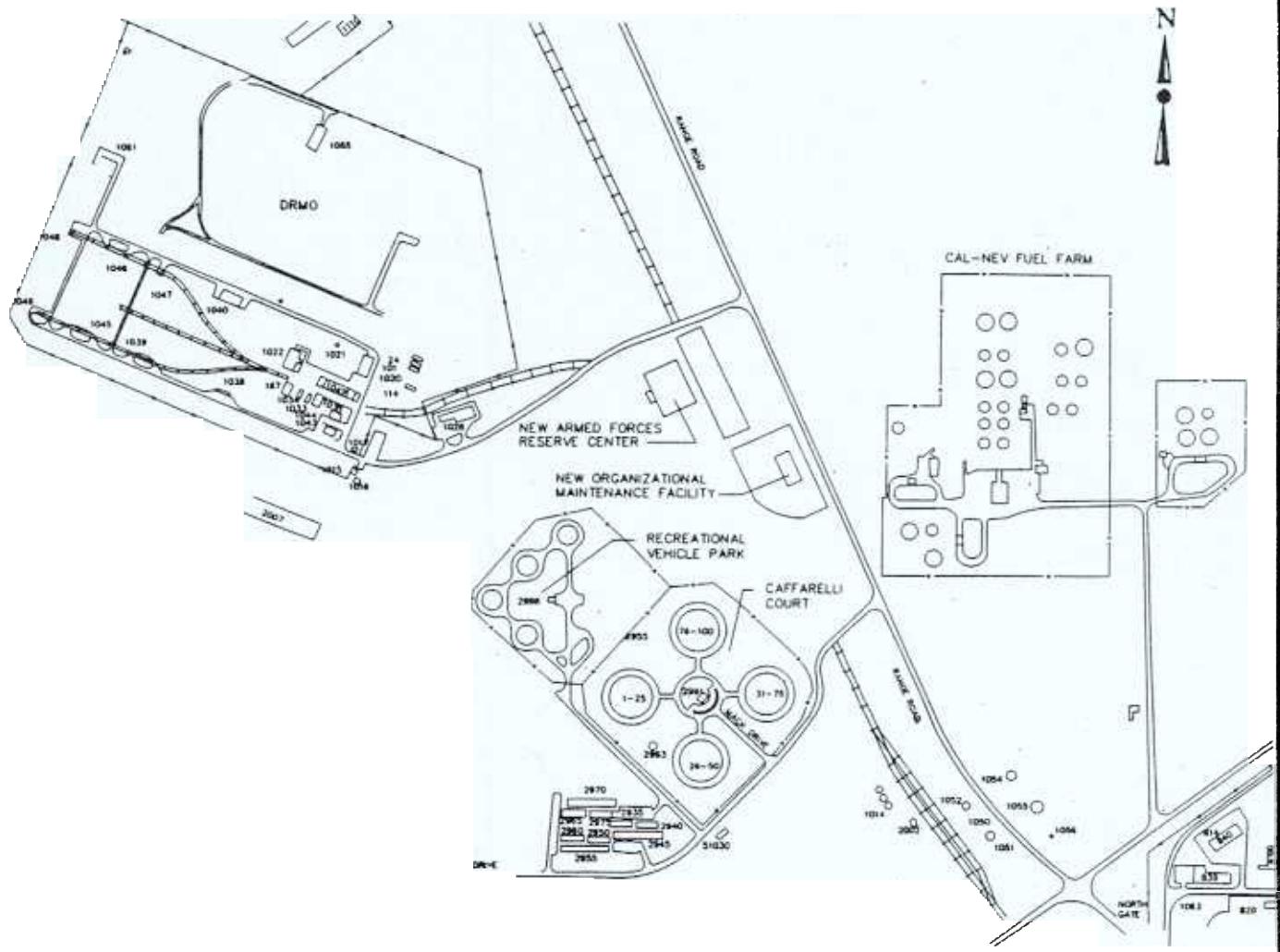
As stated earlier, the facility would be occupied by two U.S. Army Reserve units, six U.S. Navy Reserve units, and two U.S. Marine Corps Reserve units. Reserve meetings are normally conducted one or two nights per week and on weekends. The facility would require the construction of three permanent buildings. These include a 68,619 square foot (SF) two-story facility having an approximate foot print of 46,000 SF, a 1,152 SF unheated storage facility, and a 14,755 SF maintenance facility. Further, a 15,607 square yard (SY) area would be prepared for MEP (truck and trailer parking plus access) and 9,142 SY for POV parking, consisting of approximately 200 parking spaces. Figure 2-3 illustrates a conceptual design of the proposed AFRC/OMS facility. Figure 2-4 is a picture of the proposed site as it currently appears, looking south along DRMO Road.

Staffing and operations conducted by each Service Branch differ in numbers and complexity. Table 2-3 illustrates the level of personnel planned to be on site during weekdays and weekends. The U.S. Navy would have the largest weekday staff, estimated to be approximately 30 people. The U.S. Marine Corps anticipates a full-time weekday staff of 7 people, while the U.S. Army is planning for 8 full time staff members. The weekday staff would work normal business hours.

Reserve operations also vary by Branch of the Service. The U.S. Army anticipates that the facility would be used by up to 20 people one night per week. Reservists would meet three weekends per month, consisting of approximately 233 service personnel. Once each month, approximately 24 of the HET vehicles would be operating at the same time as a part of U.S. Army training and maintenance exercises.

The Navy Reserves would be on site two weekends per month. Approximately 50-60 people would participate in weekend drills. Once or twice a year, a maximum of 260 personnel would be on site for a weekend period.

The Marine Corps Reserves anticipate 40-60 Reservists one weekend per month. These same Reservists would go into the field off of the facility for two weeks once each year.



Victinity Map

U.S. ARMED FORCES RESERVE CENTER
Nellis AFB, Las Vegas, Nevada

Prepared for: 63rd ARCOM

Figure 2-3 Proposed Action Site Conceptual Design



**U.S. ARMED FORCES RESERVE CENTER
Nellis AFB, Las Vegas, Nevada**

Prepared for: 63rd ARCOM

Figure 2-4 Proposed Site, Current Condition

Table 2-3

AFRC/OMS Staffing

Organization	Weekday	Weekend Peak*
U.S. Army Reserves	50	
U.S. Navy Reserves	8	
U.S. Marine Corps. Reserves	<u>7</u>	<u>60</u>
	65	

* Peak personnel during summer drills. Not all in the field at the same time.

Specific maintenance operations to be conducted by each Branch of the Service varies to a great degree. The U.S. Army would train on and maintain all stationed Army vehicles conducting operations ranging from oil changes to engine overhaul.

Alternatives to the Proposed Action

Two viable action alternative sites were identified in Area III of Nellis AFB as potential candidate sites besides the proposed action site. Several criteria were used to determine the feasibility and reasonableness of the alternative sites for the proposed Reserve facility and to compare their suitability to the proposed action site. These criteria, and the alternatives considered, are shown on Table 2-4.

Alternative No. 1: Range Road/DRMO Road 10-acre site.

Under this alternative, the AFRC/OMS facilities would be built on a 10-acre parcel of land at the same intersection of Range Road and DRMO Road. Dimensions for this parcel are approximately 660' x 660'. The facility would require the construction of three permanent buildings. These include a 68,619 SF two-story training facility having an approximate foot print on the site of 46,000 SF, a 1,152 SF unheated storage facility, and 14,755 SF maintenance facility. Further, a 15,607 SY area would be prepared for MEP (truck parking) and 9,142 SY for POV parking. The facility would be designed to house the same number of reservists and store similar quantities of vehicles, equipment and operating facilities as the proposed action. Figure 2-5 shows a conceptual design of alternative No. 1.

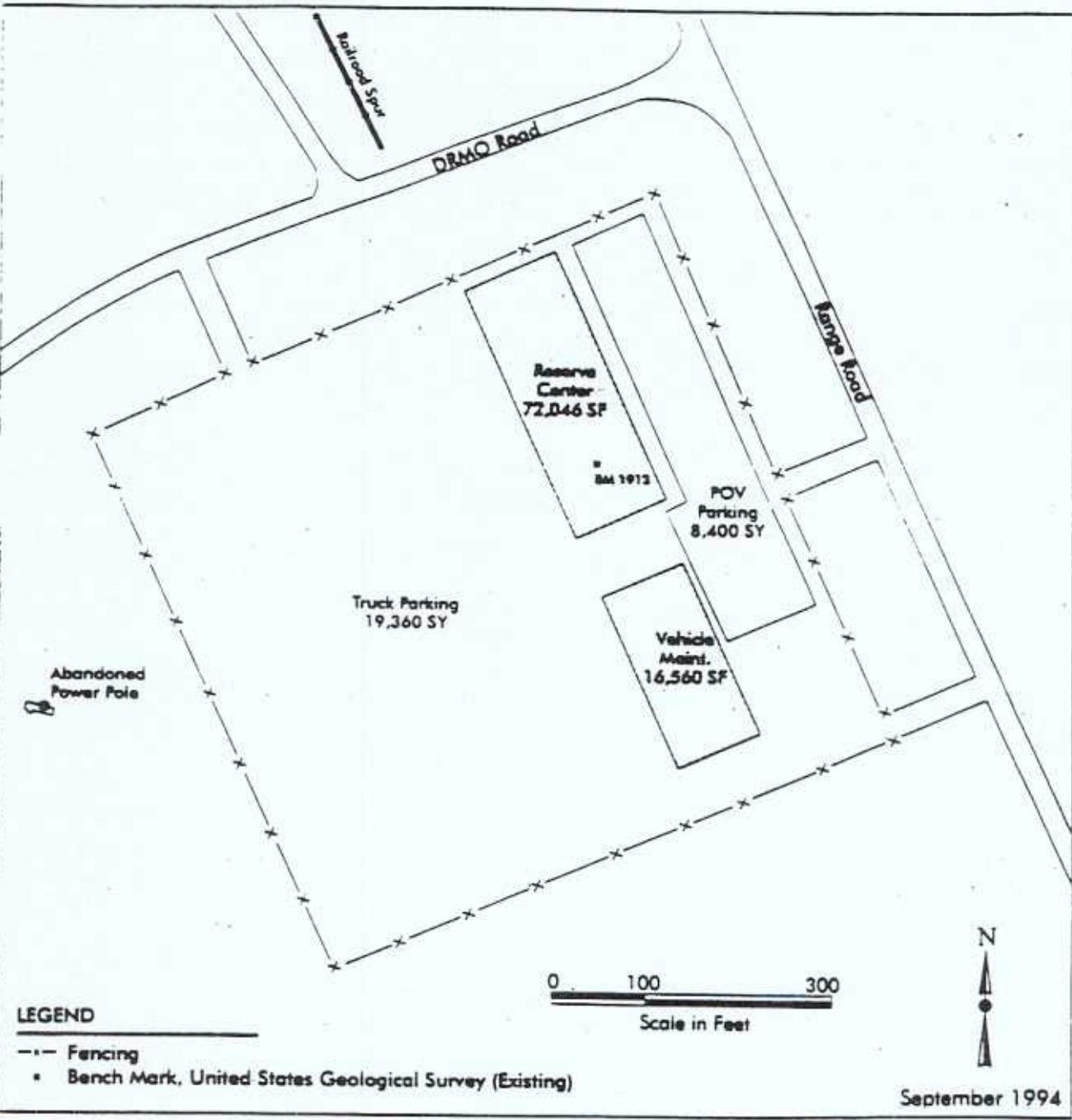
Alternative No. 2: North of DRMO Road

A second alternative to the proposed action would be to separate the training operations from the maintenance facility. The training facility would be constructed identical to the proposed action at the intersection of DRMO Road and Range Road, on the south side of DRMO

Table 2-4
Site Selection Criteria

24

Selection Criteria	Proposed Action	Alternative No. 1	Alternative No. 2	No Action
Is Air Quality Impacted	Yes	Yes	Yes	None
Is Noise a Factor	Yes	Yes	No	None
Is Water Quality an Issue	No	No	No	None
Is Biology an Issue	No	No	No	None
Is Land Use Impacted	Yes	Yes	Yes	None
Are Cultural Resources Affected	None	None	None	None
Is Hazardous Materials Management Required	Yes	Yes	Yes	No Impact
Is Hazardous Waste Management Issue	Yes	Yes	Yes	No Impact
Is Recycling Required	Yes	Yes	Yes	No Impact
Is Solid Waste Management Required	Yes	Yes	Yes	No Impact



Site Map (Conceptual Layout)



U.S. ARMED FORCES RESERVE CENTER Nellis AFB, Las Vegas, Nevada

Prepared for: 63rd ARCOM

Figure 2-5 Alternative No. 1 Site Conceptual Design

Road. The site would occupy approximately 10 acres and would consist of a 68,619 SF two-story training facility having a footprint of approximately 46,000 SF and a 1,152 SF unheated storage facility. A 9,142 SY area for POV parking would also be a part of this site.

The OMS and MEP would be constructed north of DRMO Road, on approximately 6.5 acres of land between Range Road and the Railroad tracks to the west. The maintenance building would consist of approximately 14,755 SF and the MEP would be approximately 15,607 SY. These facilities would be designed to house the same number of vehicles, equipment, and operating facilities as the proposed action. Figure 2-6 illustrates the location of the OMS facility north of DRMO Road.

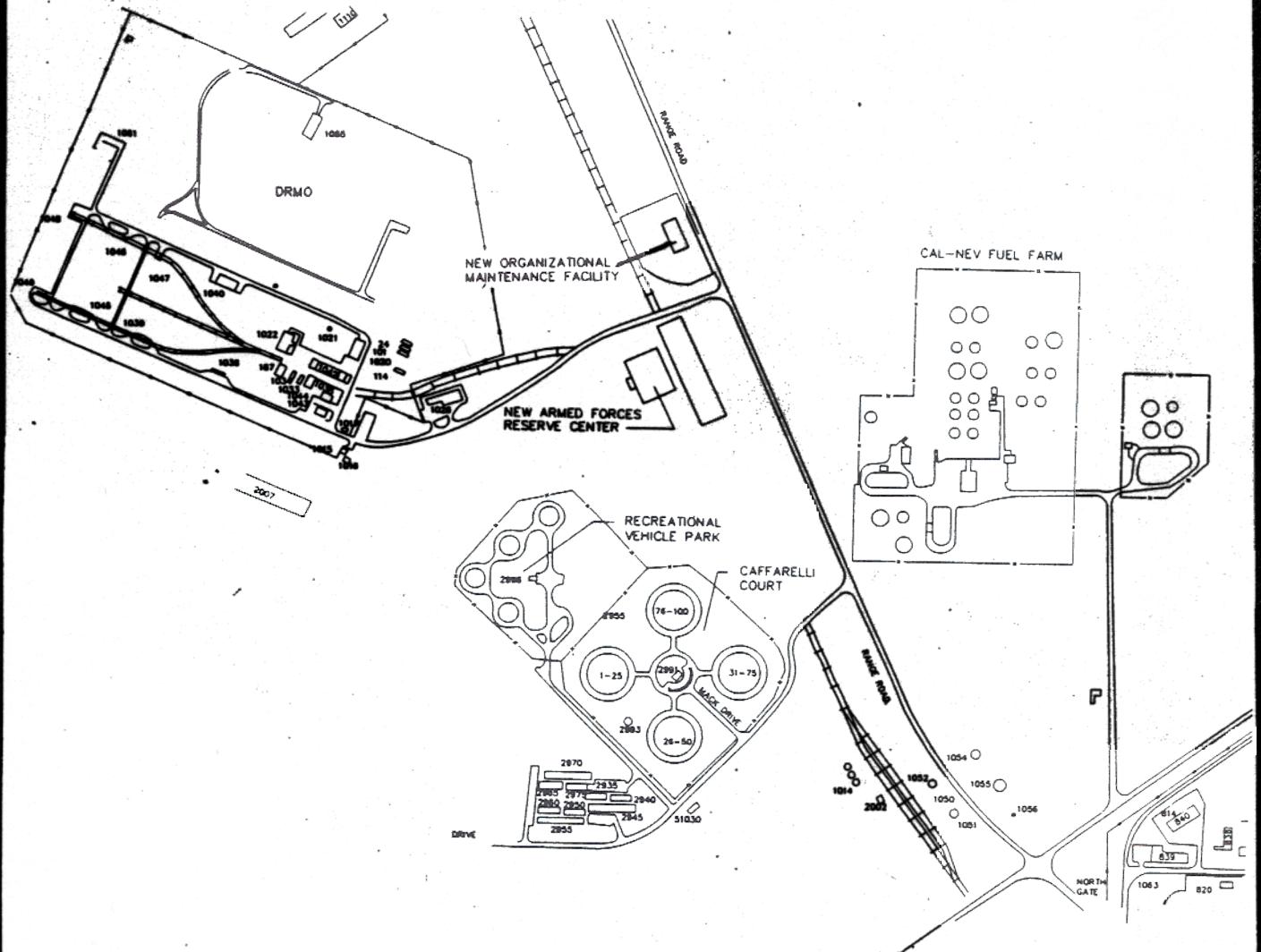
2.2.3 No Action

Under this alternative, the U.S. Army Reserve, the U.S. Navy Reserve, and the U.S. Marine Corps Reserve would continue to use the same units that they are currently occupying thereby contributing further to the existing overcrowded operating conditions of the Reserve Units and continue to negatively impact traffic in southeastern Las Vegas. Plans for the formation of two new service units (one Army and one Marine) would not be possible, thereby adversely impacting two Branches of the military in carrying out their respective missions.

Comparison of Proposed Actions and Alternatives

A total of three action alternative sites were selected and evaluated for the proposed AFRC/OMS facility in the Las Vegas area: the proposed action site and two alternatives. All sites are located within Area III of Nellis AFB.

Section 2.2 and Table 2-2 presented the rationale and criteria utilized in the formal site selection process. The three sites selected during this evaluation then formed the basis for



U.S. ARMED FORCES RESERVE CENTER
Nellis AFB, Las Vegas, Nevada

Prepared for: 63rd ARCOM

Figure 2-6 Alternative No. 2

the preparation of this EA. Table 2-5 summarizes and compares the major environmental impacts for the proposed action and each of the alternatives considered in this assessment including No Action. Further details of the individual impacts examined in this EA can be found in Section 4.0, Environmental Impacts of Proposed Actions and Alternatives.

Table 2-5
Summary and Comparison of Impacts of the Proposed Action and Alternatives

Issues	Proposed Site	Alternative # 1	Alternative # 2	No Action
Air Quality	<p>Short-term - increase in PM₁₀ (15 tons) and CO (0.66Tons) emissions. The PM₁₀ emissions would be reduced by 50 percent by watering twice daily. CO emissions would be reduced by limiting vehicle idle to less than 3 minutes. Emissions are at <i>de minimus</i> levels.</p> <p>Long-term - HETs exceed EPA Standards for PM₁₀ and NO_x. The Department of the Army (DA) has a Memorandum of Understanding (MOU) (Oct88) exempting vehicles.</p>	<p>Short-term - increase in PM₁₀ (10 Tons) and CO (.50 Tons) emissions. The PM₁₀ emissions would be reduced by 50 percent by watering twice daily. CO emissions would be reduced by limiting vehicle idle to less than 3 minutes. Emissions are at <i>de minimus</i> levels.</p> <p>Long-term - HETs exceed EPA Standards for PM₁₀ and NO_x. The DA has a MOU (Oct88) exempting vehicle.</p>	<p>Short-term - increase in PM₁₀ (15 Tons) and CO (0.66 Tons) emissions. The PM₁₀ emissions would be reduced by 50 percent by watering twice daily. CO emissions would be reduced by limiting vehicle idle to less than 3 minutes. Emissions are at <i>de minimus</i> levels.</p> <p>Long-term - HETs exceed EPA Standards for PM₁₀ and NO_x. The DA has MOU (Oct88) exempting vehicles.</p>	No Impact
Noise	<p>Short-term - construction would be temporary (less than 6 months) and during week-day daylight hours.</p> <p>Long-term - Operations of the HET vehicles in expected numbers would violate local noise ordinances for land use. A noise wall would be required to reduce noise impact to Caffarelli Court to less than 55 dBA.</p>	<p>Short-term - construction would be temporary (less than 6 months) and during week-day daylight hours.</p> <p>Long-term - Operations of the HET vehicles in expected numbers would violate local noise ordinances for land use. A noise wall would be required to reduce noise impact to Caffarelli Court to less than 55 dBA.</p>	<p>Short-term - construction would be temporary (less than 6 months) and during week-day daylight hours.</p> <p>Long-term - Operation of the HET vehicles in expected numbers would violate local noise ordinances at fence line. Impact to Caffarelli Court would be reduced significantly .</p>	No Impact

Water Use	Short-term- use of water for dust control and by construction workers provided by sub-contractor Long-term - Full-time staff -136,000 Gal/Mo. Reservists - 313,600 Gal/2-week period- No significant impact.	Short-term - use of water for dust control and by construction workers provided by sub-contractor. Long-term - Full-time staff- 136,000 Gal/Mo. Reservists- 313,600 Gal/2- week period - No significant impact.	Short-term - use of water for dust control and by construction workers provided by sub-contractor. Long-term -Full-time staff- 136,000 Gal/Mo. Reservists - 313,600 Gal/2- week period - No significant impact.	No Impact
Biology	No Impact	No Impact	No Impact	No Impact
Land Use	Residential/Recreational/Industrial Short-term - Temporary increase in construction personnel Long-term - Potential conflict with Base Comprehensive Plan	Residential/Recreational/Industrial Short-term - Temporary increase in construction personnel. Long-term - Less impact than the proposed action but still inconsistent with Base Comprehensive Plan.	Residential/Recreational/Industrial. Short-term - Temporary increase in construction personnel Long-term - Acceptable use of Base property.	Residential/Commercial
Cultural Resources	No Impact	No Impact	No Impact	No Impact
Hazardous Materials Management	Short-term - No impact Long-term - HAZMART use required- No impact	Short-term - No impact Long-term - HAZMART use required. No impact	Short-term - No impact Long-term - HAZMART use required-No impact	No Impact
Hazardous Waste Mgmt	Short-term - No significant impact Long-term - RCRA Part B- Estimated less than 100 gallons/quarter of used oil. No impact	Short-term - No significant impact Long-term - RCRA Part B- Estimated less than 100 gallons/quarter of used oil. No impact.	Short-term - No significant impact Long-term - RCRA Part B- Estimated less than 100 gallons/quarter of used oil. No impact	No Impact
Solid Waste Management	Little solid waste. Uses existing Base contractors. No impact	Little solid waste. Uses existing Base contractors. No impact.	Little solid waste. Uses existing Base contractors. No impact.	No Impact

3.0 DESCRIPTION OF THE EXISTING ENVIRONMENT

As stated in Section 2.0, the project study area (containing the proposed site and the two action alternatives) is located in Area III of the Nellis AFB complex, to the north of the Main Nellis AFB site. All sites are accessed by driving north of the Main Nellis AFB complex along Range Road. Although this is a private road, use of the road is not restricted in any manner and can be accessed by the general public. None of the three sites are protected by fencing to limit access nor are they identified specifically as Nellis AFB property.

The description of the existing environment generally applies to all of the candidate sites examined. This is true for climate, air quality, geologic setting, minerals, water, land use, and traffic. The existing environment for biology and cultural resources, although generally identical, differ to some degree due to the extensive disturbance already occurring at most of the proposed action site. Where specific existing environment characteristics are identified, they will be discussed under the specific discussion topic. For example, a discussion on biological resources will highlight the disturbance already occurring over most of the proposed project site.

The Las Vegas Valley is one of the driest and warmest areas in the nation. The climate consists of hot summers, cool winters, and a wide fluctuation in annual rainfall. Summer temperatures above 105 degrees F. and winter temperatures below freezing are relatively common. The average daily minimum and maximum temperatures during the winter months are about 35 degrees and 60 degrees F. During the summer nights, minimum temperatures average 70 to 75 degrees F. The frost free period averages about 241 days per year.

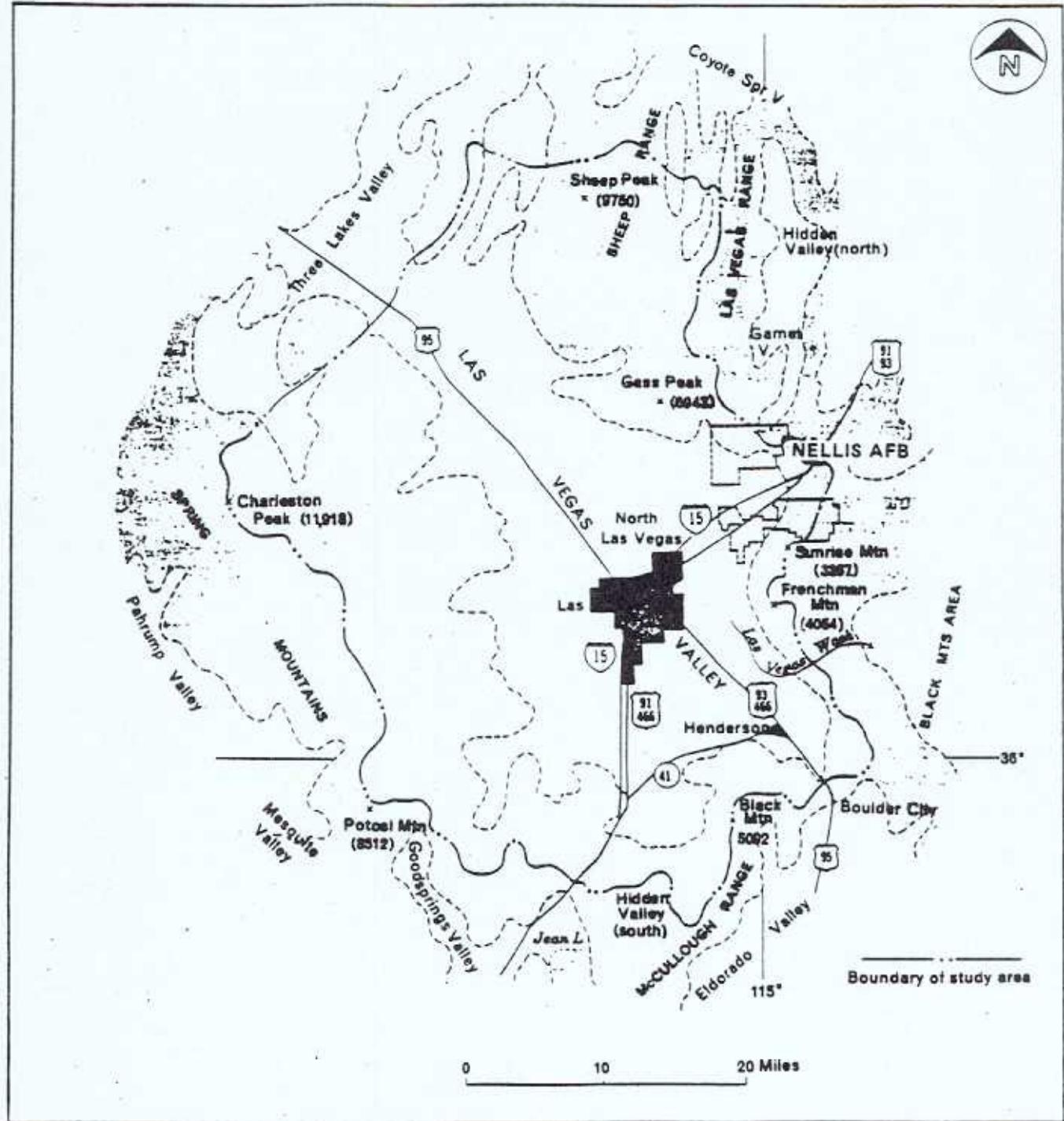
The climate of the Las Vegas Valley is typical of the Basin and Range Province ranging from arid in the basin lowlands, to semi-arid on the alluvial aprons, to sub-humid in the mountains. The arid climate of the basin lowlands is characterized by low relative humidity, low precipitation, and a wide variety of diurnal temperatures.

Evaporation in the Las Vegas Valley is high. This is partially due to the high annual average temperature, but is also influenced by wind and the prevalent low humidity. The average relative humidity is about 20 percent, and summer readings of less than 10 percent are frequent.

Most of the precipitation in the Las Vegas area falls during the months of July and August and the winter months. The precipitation in July and August is from localized high-intensity thunderstorms of short duration. The precipitation falling during the winter months is usually from regional storms of longer duration and of lower intensity. Precipitation falls chiefly as rainfall in the basin lowlands.

Strong winds are common in the area throughout the year, but are most prevalent during the spring months. Winds frequently blow from the southwest or northwest and are strongly influenced by the surrounding mountain topography. The mean wind velocity is nine miles per hour (MPH), but velocities in excess of 50 mph are experienced occasionally during the passage of a major frontal weather system.

The Las Vegas area is part of the basin and range physiographic province, consisting of a desert basin flanked by mountain ranges on all sides. Nellis AFB is situated west of the River Mountains (maximum elevation 4,054 feet) on the northeastern edge of the Valley. In addition to the River Mountains, the Las Vegas Valley is surrounded by three additional mountain ranges: the Las Vegas Range and the Sheep Range (maximum elevation 9,750 feet) to the north; by the Spring Mountains (maximum elevation 11,918 feet) to the west; and by the McCullough Range (maximum elevation 5,092 feet) to the south. The Spring Mountains and the Sheep Range consist primarily of sedimentary rocks. The McCullough Range and the River Mountains represent an igneous sequence that topographically closes the basin to the south. Figure 3-1 illustrates the major geologic features in the area.



U.S. ARMED FORCES RESERVE CENTER Nellis AFB, Las Vegas, Nevada

Prepared for: 63rd ARCOM

Figure 3-1 Major Geologic Features

The Las Vegas Valley is characterized by both bedrock and valley fill as the major geologic units of the Valley. Quaternary alluvial fan deposits coalesce along the mountain fronts forming a continual slope down into the valley floor. The boundary between the main alluvial fans and the mountains is marked by an abrupt change in slope as well as formation material. In the upper part of the alluvial fans, the materials consist of poorly sorted cobbles, boulders, sand, and gravel. At the lower elevations, materials become less coarse, more rounded and better sorted, and grade into fine sand, silt, and clay material deposited in the playa-like bottoms of the valley.

The water-bearing properties of the valley fill are not constant throughout the basin. The two unconsolidated sediments that fill the valley basin comprise the principal water-bearing units for the Las Vegas Valley, including Nellis AFB. There are two principal geologic units within the Las Vegas Valley fill: the Muddy Creek Formation, consisting of fine sand, silt, and clay; and alluvium, including the Las Vegas Formation, consisting of gravel, sand, silt, and clay.

3.1 Air Quality

The Federal rules governing conformity determinations were promulgated November 30, 1993, (58FR 63214 pursuant to section 176(c)(4) of the Clean Air Act Amendments. Subpart A relates to transportation plans, programs and projects developed, funded or approved by the United States Department of Transportation (DOT) and by Metropolitan Planning Organizations (MPOs) or other recipients of funds under Title 23 U.S.C. of the Federal Transit Act. Subpart B, General Conformity, of the same rule, relates to projects not covered as a part of Subpart A actions. The AFRC/OMS is a General Federal Action subject to Subpart B, general Conformity.

Federal Conformity Rules prohibit any activity which does not conform to an applicable State Implementation Plan for air quality. Since the Clark County Air Pollution Control District has not yet received EPA approval for its State Implementation Plan for carbon monoxide

(CO) nor has it completed its SIP for PM₁₀, the Federal conformity rules are automatically enforced in the state. Conformity rules are applied to Federal actions for each pollutant where the total of direct and indirect emissions in a non-attainment or maintenance area caused by a Federal Action would equal or exceed any of the rates identified in rule §51.853(b)(1)(2).

The Las Vegas metropolitan area is currently classified as non-attainment for carbon monoxide (CO) and as serious non-attainment for particulate matter less than 10 microns (PM₁₀). Emission inventories for the area indicate that a substantial amount of PM₁₀ is the result of natural processes, such as wind erosion from vacant land and the general building explosion in the Las Vegas area. Mineral extraction operations in the northeast and southeast parts of the Clark County Planning area also contribute to the area PM₁₀ emissions problem. Las Vegas is rated as one of the five worst areas of the United States for PM₁₀ emissions according to the Clark County Department of Comprehensive Planning and the Clark County Health District.

To help bring Clark County into compliance with EPA standards by the year 2000, the APCD has set the following priorities:

- To reduce the emissions of particulate (PM₁₀), carbon monoxide (CO), pollen, and Hydrogen sulfide;
- To maintain compliance status for ozone, nitrogen dioxide (NO₂), and sulfur dioxide (SO₂);
- To assure compliance with Clean Air Act and Board of Health mandates; and
- To track developments related to energy, climate change policy, industrial growth, clean air corridors, and urban growth.

Efforts to improve the air quality in the Las Vegas area are starting to show some signs of taking effects. The oxygenated fuel program has been in place for five (5) winters. Figure 3-2 illustrates an 18 year history of CO emissions at the Clark County Health District Offices. These results show a significant improvement in the CO emissions rate in the last four (4) sample years (Clark County Health District, 1993). The decrease in CO is even more dramatic, considering the population growth experienced by Las Vegas in recent years.

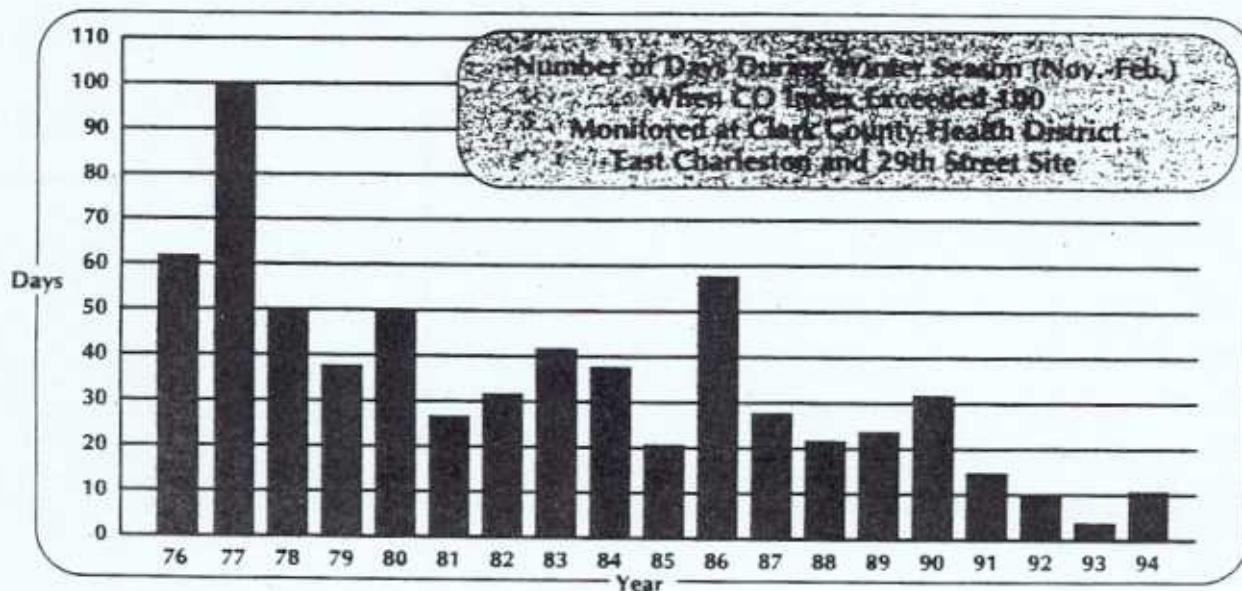
Efforts to reduce PM₁₀ have also been successful. Annual average values have fallen from their peak levels reached in 1990. The level of PM₁₀ emissions has steadily increased in the past three years, but these levels are still considerably below the 1990 emissions level. A number of areas in the Valley still however, exceed the 24-hour standard, apparently due to nearby sources of fugitive dust. Figure 3-3 illustrates the fugitive dust emissions (PM₁₀) history in Clark County.

Air pollutants in the area of Nellis AFB are generated by numerous Nellis AFB on-site sources and from the surrounding areas. These sources include aircraft flight operations, aircraft and ground-maintenance operations, aerospace ground-equipment operations, surface coating operations, fire training exercises, motor vehicle operations, fuel storage and refining, and heating and power production.

Current hydrocarbon emissions from the area of the proposed AFRC/OMS site include: fuel storage facilities located southeast of the site along Range Road, rail tanker cars parked along rail spurs; the maintenance facility to the northwest of the site; and industrial complexes further north along Range Road.

3.2 Noise

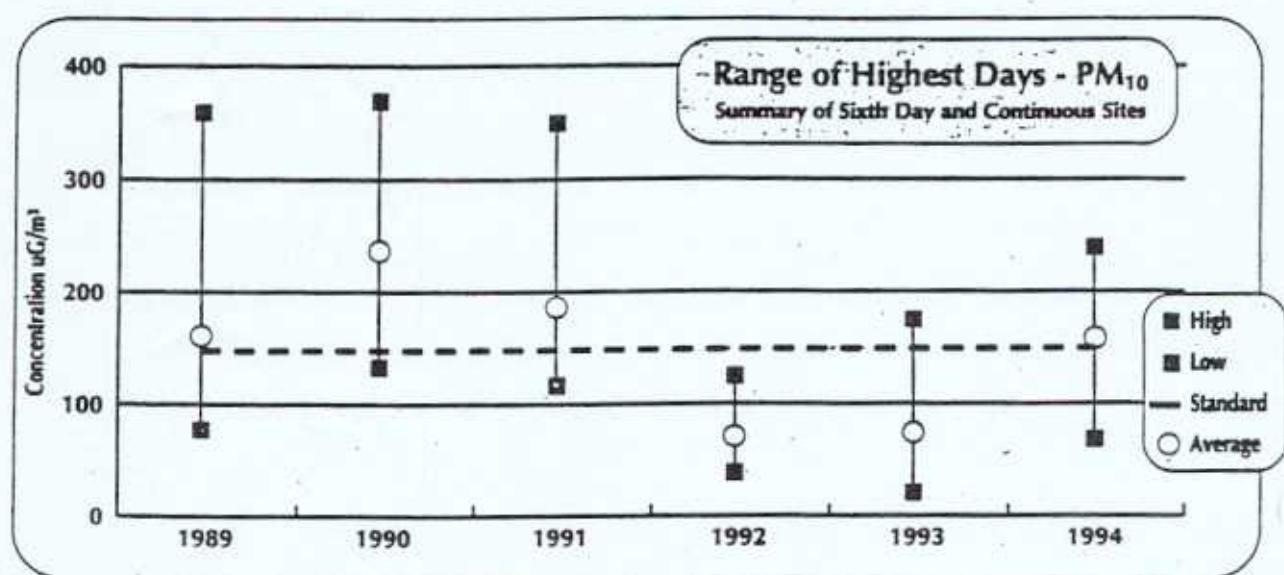
Development in areas surrounding air installations, underlying military training routes (MTRs) and military operating areas (MOAs), result in exposure of the public to noise



U.S. ARMED FORCES RESERVE CENTER Nellis AFB, Las Vegas, Nevada

Prepared for: 63rd ARCOM

Figure 3-2 Eighteen Year History of CO Emissions



Vicinity Map

U.S. ARMED FORCES RESERVE CENTER
Nellis AFB, Las Vegas, Nevada

Prepared for: 63rd ARCOM

Figure 3-3 Five Year History of PM_{10} Emissions

associated with military aircraft operations and ancillary efforts. The Noise Control Act of 1972 established that Federal Agencies, when engaged in an activity resulting in the emissions of noise, should comply with Federal, state, interstate, and local requirements, respecting the control and abatement of noise to the same extent as private entities. State, regional, and local governmental agencies may develop zoning and planning ordinances which have the potential to affect Air Force Installations and their operations.

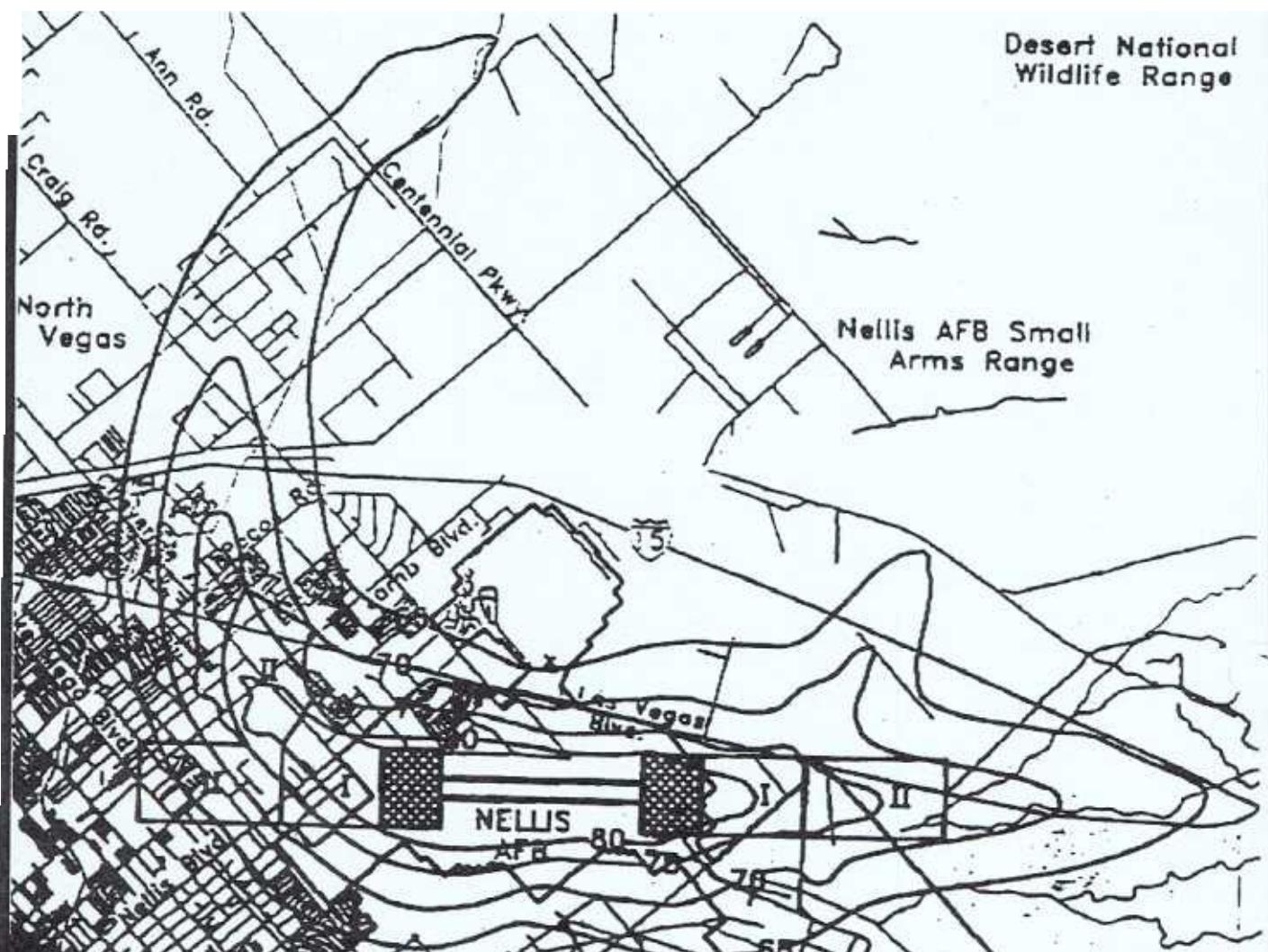
Existing noise levels in the Nellis AFB area are a mixture of noise intensities ranging from aircraft operations nearby at Nellis Main Base in Area I to the typical noise characteristic of an industrial area. The primary noise source in the affected area is the Nellis runway operations with thousands of sorties flown each year. Figure 3-4 illustrates the existing noise zones at Nellis AFB. The site for the proposed AFRC/OMS facility currently receives noise exposure levels up to 70 dB in intensity.

Noise regulations for Clark County are referenced in "The General Conditions Code Book" under Title 29.44.100, Noise. Noise limits are categorized by octave range at the boundary line of the property. Additional night time restrictions also apply between the hours of 9:00PM and 7:00AM. Night time noise level limits identify the maximum noise level that may occur within 500 feet of a residence. Table 3-1 presents the Clark County noise ordinances.

The primary industrial noise near the proposed site would be expected from the heavy trucks operating along Range Road. Table 3-2 provides an indication of the currently intensity of background noise levels that might be encountered in the area of the proposed AFRC/OMS facility.

3.3 Water

The following sections discuss the surface water, groundwater, water use, and waste water characteristics of the Nellis AFB area. No wetlands exist on the proposed site or any of the



U.S. ARMED FORCES RESERVE CENTER
Nellis AFB, Las Vegas, Nevada

Prepared for: 63rd ARCOM

Figure 3-4 Existing Nellis AFB Noise Zones

Table 3-1
Clark County Noise Ordinance Standards*

Time Allowed	Octave Range	Maximum Limits(dBA)
Day time(7:00AM-9:00PM)	20-300cycles	60
	300-2400cycles	45
	above 2400 cycles	35
Night time (9:00PM-7:00AM)**	20-300cycles	55
	300-2400cycles	40
	above 2400 cycles	30

* Title 29.44.100, Noise

** Within 500 feet of a residence

Table 3-2
Intensity of Various Sounds

Sound Source	Intensity Level(dB)
Jet plane at 30 m	140
Threshold of pain	120
Loud indoor rock concert	120
Siren at 30 m	100
Auto interior, moving at 90 km/h	75
Busy street traffic	70
Ordinary conversation at 50 cm	65
Quiet radio	40
Whisper	20
Rustle of leaves	10
Threshold of hearing	0

alternative sites.

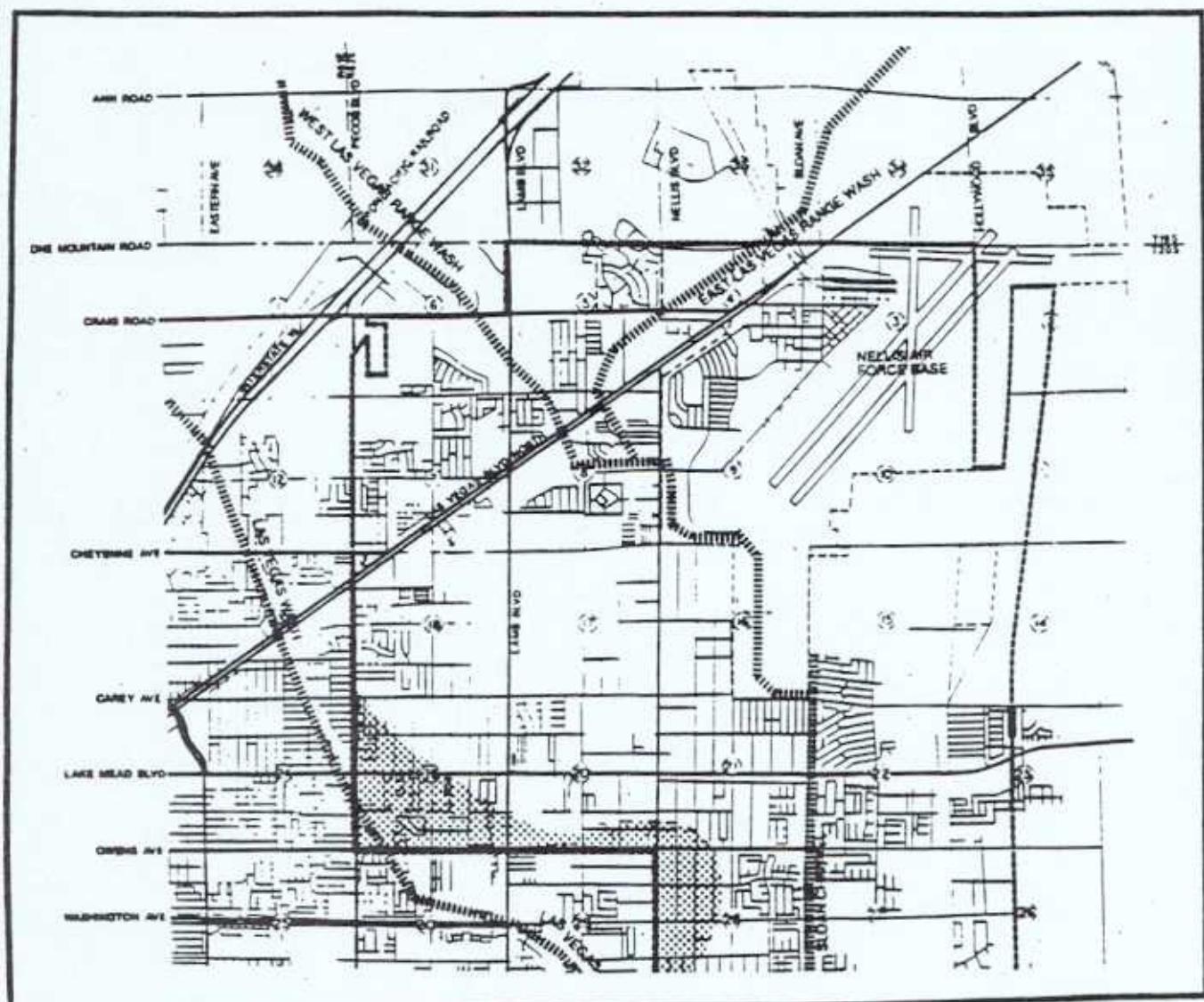
Surface Water

Nellis AFB can be characterized by a lack of perennial streams throughout the Nellis AFB area. Natural surface runoff does occur, but it is limited to the infrequent storms that occur throughout the Valley area. Localized thunderstorms can produce significant, high-intensity, and short duration rainfall events that can result in flooding. Storms occurring during the winter months are normally of less intensity and do not have a high flooding potential associated with the term event.

Water runoff from either type of storm event does not represent a major source of groundwater recharge. Some surface water does percolate to the shallower aquifer, however, the majority of the storm water leaves the basin through the Las Vegas Wash. Surface drainage in the vicinity of the project study area leaves the area primarily through the East Las Vegas Range Wash which is the major drainage wash near Nellis AFB. This wash generally runs parallel to Las Vegas Boulevard, approximately 1000 feet south of the proposed AFRC/OMS site. Figure 3-5 illustrates the surface water drainage patterns in the area around Nellis AFB. The approximate 100-year floodplain is also illustrated on this figure, demonstrating that Area III of Nellis AFB is not in the 100-year floodplain.

3.3.2 Groundwater

In the Nellis AFB area, groundwater occurs within the valley sediments. A significant portion of the Base's water supply is obtained from on-base water wells. Figure 3-6 illustrates the location of the on-site water wells. In addition to the on-site wells, there are two active wells located about 4 miles west of the Base on Craig Road. These wells are located in an area where the aquifers are more permeable, providing a higher water yield rate.



Legend:

Major Wash

Approximate 100-Year Floodplain

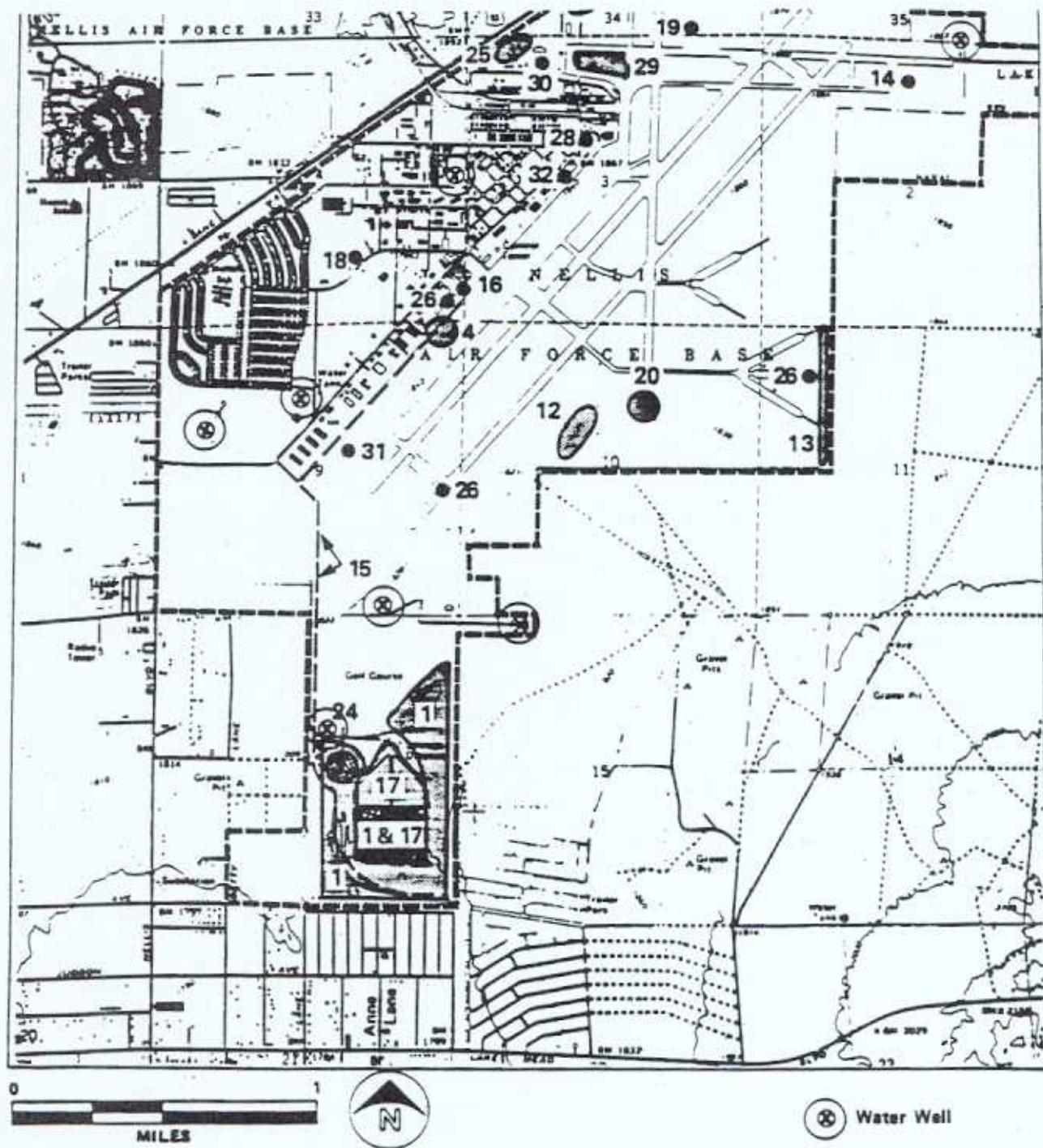
September 1994



U.S. ARMED FORCES RESERVE CENTER Nellis AFB, Las Vegas, Nevada

Prepared for: 63rd ARCOM

Figure 3-5 Surface Water Drainage



U.S. ARMED FORCES RESERVE CENTER
Nellis AFB, Las Vegas, Nevada

Prepared for: 63rd ARCOM

Las Vegas

Vicinity Map

Figure 3-6 Water Well Location

Originally groundwater levels were at or near the surface throughout a large area of the Las Vegas Valley. In the vicinity of Nellis AFB, the potentiometric surface was zero to 50 feet below the surface prior to the development of the Las Vegas area.

As metropolitan Las Vegas developed, the demand for groundwater increased to the point where 80,000 acre-feet per year were pumped out of the Las Vegas Valley aquifers in the early 1970's. This pumpage rate represented extraction at over twice the estimated aquifer recharge rate, creating a progressive decline in groundwater levels.

Later in the 1970's, Las Vegas ceased its dramatic dependency on area groundwater with the completion of a pipeline to Lake Mead. This allowed Las Vegas to tap into the Colorado River water supply. The long-term decline in groundwater levels stopped with the completion of the Lake Mead pipeline. Area monitor wells have shown a recharge to the Las Vegas aquifer. The depth to groundwater beneath Nellis AFB ranges from 60 -120 feet for the shallow aquifer while the deeper aquifer is 600-1000 feet deep. Groundwater levels in Area m and at the small arms range become progressively deeper towards the mountains.

3.3.3 Water Use

Potable water for current operations at Nellis AFB is provided by three sources. The first is potable water from 10 wells in Area 1 and west of Craig Road; the second is potable water from the Colorado River; and the third is non-potable water from four wells in Area II. In addition to these sources, the City of North Las Vegas, supplies a Department of Energy facility on Base and the new VA/USAF hospital with comparatively small amounts of water. Nellis AFB gets approximately 25 percent of its potable water from the 10 Base wells that draw from the lower aquifer underlying the base.

Colorado River water is delivered from the Colorado River Commission (CRC) via pipelines owned and operated by the Las Vegas Valley Water District. Major (12-18 inch) water service supply pipelines in the area supply Nellis AFB and the water needs of the adjacent areas.

Nellis AFB has contracted with CRC for the purchase of 4,000 acre-feet of water per year with a maximum draw of six cubic feet per second. Nellis does not currently consume its full allotment of water from CRC. Nellis AFB is however, exceeding its maximum draw rate of six cubic feet per second during peak withdrawal rates in the summer months. This fact illustrates the need to address temporary water storage facilities to eliminate the excess draw down rather than any other change in operating philosophy.

3.3.4 Water Quality

The term waste water covers a broad scope of water quality concerns which may affect many natural water resources. The Clean Water Act (CWA), a 1977 reauthorization of previous legislation known as the Federal Water Pollution Control Act (FWPCA), is the principal Federal legislation which addresses the control of water pollution. The CWA makes it illegal for any person, including those on Federal facilities, to discharge pollutants from an industrial or domestic point source into the waters of the United States without permission. The CWA also establishes the NPDES program for the issuance of such permits.

Stormwater permits are required by federal law for construction activities that disturb five or more acres of land and discharge stormwater to the waters of the United States. The State of Nevada has been issued a general permit, Permit No. GNV0022241, to meet this requirement. The project applicant is required to submit a notice of intent (NOI), prepare a stormwater pollution prevention plan, and submit a \$200.00 fee no later than two days prior to the start of construction.

There are no groundwater monitoring wells in the proposed and alternative locations. Known groundwater contamination of the shallow aquifer exists across and down gradient. Across Range Road east of the proposed location, groundwater contamination from hydrocarbons does exist beneath the CAL-NEV fuel farm.

3.4 Biology

The Las Vegas Valley contains a diverse array of vegetation types. The study area lies between the Mojave Desert to the west and south and the Great Basin Desert to the north. A

transitional zone, which includes the Las Vegas area, extends west from southwestern Utah to southern California.

The most widespread biotic community in the vicinity of Nellis AFB is the creosote bush community comprised primarily of creosote bush and bursage. In undisturbed areas around Nellis AFB, these shrubs grow in scattered clumps that increase in density near water sources. The density of plant communities within Area III of Nellis AFB is reduced compared to naturally occurring undisturbed communities in other areas of the valley. This is a result of area development and public intrusion impacting the survivability of fragile desert vegetation. Although no protected plant species were observed during the site visit, an unconfirmed identification of the California desert poppy (*Arctomecon californica*) has been reported in an area northeast of Area III.

As stated earlier, the preferred site for locating the AFRC /OMS facility has been highly disturbed as a result of the surface excavation of almost 6-feet of materials over most of the site. The site is almost totally void of vegetation and animal life. Because of the site's close proximity to Range Road and corresponding vehicular traffic, the site has also been used as a refuse dumping ground by many area visitors. Figure 3-7 illustrates some of the debris found along the perimeter of the proposed site.

The areas of least disturbance remaining at the site are the United States Geological Survey (USGS) Bench Mark and the site perimeter areas. The mound remaining in place near the center of the site contains the U.S.G.S. bench mark. The site's perimeters contain limited plant population due to the site's usage for disposal of refuse and other materials.

A survey of the site vegetation showed a sparse population density of creosote bush/bursage (*Larrea tridentata/Ambrosia dumosa*), and several globe mallow (*Sphaeralcea ambigua*) and saltbushes (*Atriplex* spp). Several annual forbes and annual grass species were observed on site, but few of these species were identifiable due to their poor condition during this winter survey.



**U.S. ARMED FORCES RESERVE CENTER
Nellis AFB, Las Vegas, Nevada**

Prepared for: 63rd ARCOM

Figure 3-7 Existing Site Debris

Alternative Site No. 1, a smaller square parcel within the 30-acre site of the proposed action, shows even greater disturbance than the proposed action site. A higher percentage of the property has been excavated, resulting in less site vegetation.

The perimeter of the proposed AFRC/OMS site might be classified as a potential habitat for several protected animal species by the U.S. Fish & Wildlife Service and the State of Nevada, but a visual survey of the property indicated no populations of protected species. The desert tortoise (*Gopherus agassizii*), a Federally-threatened species; the chuckwalla (*Sauromalus obesus*), the spotted bat (*Euderma maculatum*), and the Gila Monster (*Heloderma suspectum*), a State of Nevada protected species, are all potential visitors to the site. However, the heavy disturbance to the site already, the lack of vegetative cover, and the trash remaining on-site, limits the attractiveness of the site to most animals. This factor, together with the sites close proximity to two roads (Range Road and DRMO Road), make the site very unappealing to animal populations.

On August 21, 1991, Nellis AFB requested a formal consultation with the U.S. Fish & Wildlife Service for proposed developments on Nellis AFB property. On May 12, 1992, the U.S. Fish & Wildlife Service released a Biological Opinion for the Proposed Operation of Existing Facilities and Development on the Nellis Air Force Base. This formal consultation process, pursuant to Section 7 of the Endangered Species Act of 1973, as amended, identified those species that may potentially be impacted by development at Nellis AFB. The only species listed in this Biological Opinion was the Desert Tortoise (*Gopherus agassizii*). The U.S. Fish & Wildlife Service states:

"It is our Biological Opinion that the proposed operation of existing facilities on Nellis in Las Vegas, Nevada, is not likely to jeopardize the continued existence of the threatened Mojave population of the desert tortoise. Critical habitat was designated for the Beaver Dam Slope subpopulation in Utah in 1980, but not for the subpopulation in Arizona, California, and Nevada. Therefore, no critical habitat will be destroyed or adversely modified by these activities."

Further, significant Mojave Desert Tortoise surveys were completed by Sierra Delta Corporation in 1991 on and around Nellis AFB property as part of a Biological Assessment for the tortoise. Area 6, a parcel of 245 acres located northwest of the proposed site, showed no signs of the Mojave Desert Tortoise.

Other sensitive species that have been identified by the U.S. Fish & Wildlife Service that could be found in the area include: the spotted bat (*Euderma maculatum*), and the loggerhead shrike (*Lanius ludovicianus*). Both of these species are federal category-2 species but are unlikely to occur on site due to lack of suitable habitat. The Gila monster (*Heloderma suspectum*), is a State of Nevada protected species.

Alternative No. 2, consisting of approximately 6.5 acres north of DRMO Road for construction of the OMS and MEP parking, contains the same species of plants found on the proposed site. Creosote bush, bursage and salt bushes dominate the landscape and occur to a greater degree than on the proposed action site. Although the site is less disturbed than the proposed site, it still shows signs of disturbance and contains no protected species of plants or animals.

3.5 Land Use

Nellis AFB and parts of the surrounding land area falls in an unincorporated township of Northwest Clark County. The land use plan developed for Nellis AFB has established the goals, objectives, and policies to meet the future development and planning requirements for the Nellis site. The Clark County Department of Comprehensive Planning is the major controlling agency overseeing growth in the community surrounding the Nellis AFB.

The dominant land use feature in northeastern Clark County is Nellis AFB. The Base consists of 11,496.8 acres, or 17.96 square miles of land area. Area III is the location of all project alternatives and is situated northwest of the Main Nellis Site (Area I site). Area III contains 1.9 square miles or 1 percent of the total Nellis land area. The area is separated

from the other two Base areas by Las Vegas Boulevard to the southeast of the proposed site and consists of a mixed use of open space, family housing, industrial development, and recreational uses. Approximately 865 acres are open space, 200 acres are housing, and 111 acres are industrial. Twenty one acres are utilized for outdoor recreation.

Area III usage surrounding the proposed site consists of industrial developments to the east of Range Road in the form of fuel storage tanks (both Cal-Nev and Nellis AFB sites); railroad spurs, auto wrecking and salvage operations to the northwest of the site (on the west side of Range Road); and commercial development along Las Vegas Blvd. to the southwest of Craig Road.

Specific Nellis AFB developments in area III consist of: the outdoor recreation area to the south of the proposed facility, the Nellis Federal Hospital located to the west of Range Road along Las Vegas Blvd., and the family housing (Caffarelli Court) to the southwest of the Family Camp. The Defense Reutilization and Marketing Office (DRMO) and Security Police occupy facilities to the northwest of the site, along DRMO Road.

Primary opportunities for commercial development in the area lie west of Nellis Blvd., approximately one mile from the proposed site at its nearest point. The Clark County Comprehensive Plan agrees with the promotion of this area (west of Nellis Blvd in that commercial development in this manner will help protect operations at Nellis AFB and limit the focal point of area development away from the Base. Development of this nature will also provide economic benefit to the local community.

3.6 Traffic

The Traffic Section of the Research Division at the Nevada Department of Transportation (NDOT) is responsible for the collection, tabulation, and analysis of traffic trends throughout the state. In 1993, the Traffic Section monitored daily traffic volumes on a continuous hourly basis at two traffic count stations located in the vicinity of Nellis AFB.

The closest, Station 200, is located 0.2 mile north of the main gate to Nellis AFB, on Las Vegas Boulevard. The Second Station, Station 201, also located on Las Vegas Blvd, is northeast of the Nellis AFB site, approximately halfway between Nellis AFB and Interstate Highway 15.

It should be noted that traffic counts have dropped dramatically at Station 200 (closest to the Nellis AFB main gate) since 1989. In 1989, traffic counts for this Station reached an annual high of 21,400. This was the highest number of vehicles ever recorded at this Station. In 1989, Nellis AFB relocated the main Base entrance, modifying the flow of traffic resulting in a decrease in traffic along Las Vegas Boulevard. Since 1989, traffic counts have dropped dramatically and totalled only 9,700 in 1993. For the past four years, traffic numbers have been relatively consistent, varying from a low of 8,960 in 1990 to a high of 9,715 in 1992.

At Station 201, 0.1 mile south of the road to the Lake Mead Base, traffic counts are considerably lower, due partially to the remoteness of the area and its location away from the main population centers. The Annual Average Daily Traffic (AADT) values for this Station have risen slowly since 1984 from a count of 3,360 to a peak in 1992 of 4,585. The AADT values for 1993 dropped slightly to 4,250.

3.7 Cultural Resources

The Nellis AFB area and all of Southern Nevada are a part of the prehistoric culture area identified as the southwestern Great Basin. The common elements of the cultures of this area were their collecting lifestyles and habits that allowed them to gather and exploit the various resources available throughout the changing seasons.

The earliest known inhabitants in the area can be traced to sites near the Tule Springs area and date back to the Paleoindian occupation period. This period, dating before 10,000 years before present (B.P.) to about 8,000 B.P., was characterized by nomadic groups hunting

large mammals, including mammoths or mastodons. The succeeding Archaic period, dating 8,000 B.P. to approximately 1,500 B.P., was characterized by improvements or refinements to the foraging or seasonal collecting lifestyles. Archaic sites are known from the Corn Creek Dunes area to the north of Nellis, Tule Springs, and the Berger site to the south.

Evidence of a changing lifestyle to include horticultural adaptations i.e., simple gardening, next appeared and were a part of the protohistoric Southern Paiute existence. Agricultural groups were known to occupy the Virgin and Muddy River drainage by about 1,500 B.P. Archaeological records at the Museum of Natural History, University of Nevada, Las Vegas, were searched for previous surveys in the vicinity of Area III to determine the potential existence of cultural resources in the area. Cultural resources identified and reported during these surveys vary from small lithic scatters to large temporary camps. None of these resources were identified at either the proposed action site or the alternatives.

The potential cultural resource value of the proposed site is further reduced by the excavation of approximately 6-feet of surface and sub-surface materials as fill for the recently constructed Nellis Federal Hospital. A very limited original environment exists at the site; predominantly around the perimeter area adjacent to Range Road and DRMO Road. One additional very small area surrounding the USGS benchmark on the site is also relatively undisturbed. Because of the highly disturbed nature of the existing site, and the removal of such a large degree of surficial materials, a Class III Cultural Resources survey was not conducted on this site.

Alternative No. 1 to the proposed action shows an even greater level of disturbance than the proposed site further reducing the potential for any cultural resources. Alternative No. 2, although less disturbed than the proposed action site, still has no identified cultural resources.

3.8 Hazardous Materials Management

All hazardous materials entering Nellis AFB are controlled by the Base HAZMART. Controlled by a highly sophisticated database management system, the database tracks hazardous materials by manufacturer as well as formulas. This allows for tracking of differences in product formulation. It also provides for tracking of changes in product formulation or brand new hazardous materials entering the Base.

3.9 Hazardous Waste Management

Hazardous wastes are certain solid wastes that appear in the EPA's "Listed Wastes" in 40 CFR 261, or are wastes which demonstrate characteristics of ignitability, corrosivity, or reactivity, or exceed Toxicity Characteristic Leaching Procedure (TCLP) toxicity limits. Air Force Installations typically generate waste solvents, oils, paints, and sludges which may be regulated as a hazardous waste. The Resource Conservation and Recovery Act (RCRA) and its amendments mandated regulations to control hazardous waste from their origin through collection, storage, transport, treatment, and ultimate disposal. Nellis AFB closely manages all of the hazardous wastes generated on-site. Waste is segregated and managed according to waste types and disposed of according to Base practices and is consistent with all Federal, state, and local disposal requirements. All waste oils, lubricants, and solvents are collected and disposed of in accordance with Base and RCRA requirements. Scrap metals are sent to the DRMO facilities just west of the proposed AFRC/OMS facility. Oil filters are drained and crushed, double bagged, and sent to the DRMO facility. Solid wastes are collected by Silver States under a service contract with Nellis AFB.

4.0 ENVIRONMENTAL CONSEQUENCES

This section discusses the potential environmental consequences of the proposed action and alternatives for the planned AFRC/OMS facility. The proposed action is to construct a new AFRC/OMS facility on a 16.5-acre parcel of land within Area III of Nellis AFB. The alternatives are to construct a similar AFRC/OMS facility on a much smaller parcel (10-acres) of land at the same intersection; build a new AFRC/OMS facility spanning both sides of DRMO Road, or the no action alternative in which the Army, the Navy and the Marine Corps Reservists will continue to use their existing downtown Las Vegas location. The proposed action and each of the alternative actions will discuss the potential impacts of each alternative based on the information presented in Section 3.0., Description of the Existing Environment. Short-term impacts (if any) are discussed as the first impact element of each technical subject.

4.1 Proposed Action

The environmental consequences of the proposed action would potentially impact the following environmental protocols: air quality - short and long term, noise, water resources, biological resources, land use, traffic, cultural resources, and hazardous waste management.

4.1.1 Air Quality

The existing ambient air quality and emission rate of pollutants in the Las Vegas Valley were discussed in Section 3.0. The type of pollutants considered in this EA are those historically regulated by federal, state, and local regulatory agencies. Of primary importance are those pollutants regulated as "criteria pollutants" through the National Ambient Air Quality Standards (NAAQS). These six pollutants are: ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, particulate matter (PM_{10}), and lead. In the Las Vegas area, the criteria pollutants of greatest concern are carbon monoxide and

particulates. Nellis AFB, located in Clark County, is located in a moderate non-attainment area for carbon monoxide and a serious non-attainment area for PM₁₀ (particulate matter). Conformity analysis will be limited to these two priority pollutants.

Short-term Impacts

The proposed action would result in short-term, temporary increases in PM₁₀ and CO emissions during construction of this new facility. Construction on the proposed site would require the import of and placement of approximately 155,000 cubic yards of fill material to bring portions of the site up to an acceptable grade. The site was initially used as a borrow pit for fill material during the construction of the nearby Nellis Federal Hospital. It is proposed to provide fill material from two sources: 130,000 cubic yards from a nearby borrow pit on Federal lands, approximately two miles north of the proposed site along Range Road and approximately 25,000 cubic yards by deepening the existing pit on the proposed project site.

Using a conservative conversion factor of 1.4 Tons per cubic yard, the 130,000 cubic yards needed from the borrow pit will weigh approximately 182,000 lbs. The EPA emission factors for excavation of borrow materials using batch drop excavation techniques are 0.0024 lbs/ton. This equates to the generation of approximately 437 pounds or 0.2 Tons of PM₁₀ particulates as a result of the excavation process.

It is estimated that about 7,222 trips (using conventional 10-cubic yard belly dump trucks and 8-cubic yard pup trailers) would be required for delivery of fill material. This is based on the need to transport approximately 130,000 cubic yards of fill material to the site at a rate of 18 cubic yards per trip. Fugitive dusts generated as a result of this operation are calculated based on total vehicle miles traveled. Based on a total of 7,222 trips, requiring approximately four miles per round trip, an estimated 28,888 vehicle miles will be traveled to relocate fill materials. Utilizing an EPA emission factor generated for collector streets (0.013 lbs/vehicle mile traveled), it is estimated that approximately 375 lbs or 0.189 Tons of

fugitive dusts would be generated.

Site excavation, grading, and compaction are the primary site excavation activities that would add to and PM₁₀ emissions. The EPA emission factors for heavy construction activity are calculated to be 1.2 Tons/acre of land under construction per month. This factor is for all total suspended particulates and not strictly PM₁₀ emissions. Based on particle size dynamics, the PM₁₀ emission factor is conservatively 0.5 of the total or .6 Tons/acre.

Although the project site is approximately 16.5 acres, it is estimated that less than 15 acres of land will be disturbed by project construction. Further, less than half of this area would be under construction at the same time. Therefore, based on an actual disturbance of approximately 7.5 acres per month, a total of 4.5 Tons/month of PM₁₀ emissions could result from the site preparation work. It is estimated that site preparation activities would last up to three months. The total anticipated emissions for this activity are therefore estimated to be 13.5 Tons. For all construction activities associated with the AFRC/OMS facility, a total emission of less than 14 Tons of PM₁₀ emissions are expected.

The Clark County Health District requires a construction permit (Dust Control) permit for any construction project that would disturb more than 1/4 of an acre. Besides the initial application fee of \$26.40, projects are assessed fees based on their potential to emit (PTE) dust. The PM₁₀ Offset Calculations for the Construction Activity Permit is based on calculations using the formula:

$$\text{PTE}_{\text{PM-10}} = (\text{n Acres}) \times (654 \text{ lbs/acre}) \times (1 \text{ Ton}/2000 \text{ lbs}) \times 1 \text{ year}$$

Using this formula to calculate PM₁₀ emissions results in the calculation of 5.4 Tons/year of PM₁₀ emissions. Penalties or fees are assessed based on these emission calculations at a rate of two times the amount generated times a fee of \$581.00 per Ton. Based on this formula, and the proposed projects' calculated emissions rate of 5.4 Tons/year, a fee of:

5.4 Tons/yr. x 2 x \$581.00 per Ton

equals a Offset fee of \$6,274.80.

For completeness, it is appropriate to examine the project for "Regional Significance" which is defined for the nonattainment pollutants as emitting 10 percent or more of a nonattainment or maintenance area's emission for that pollutant. The Las Vegas Valley PM10 emissions are approximately 170 Tons/year. The calculated emissions for the proposed project are roughly 14 Tons during construction. The Clark County Air Pollution Control District considers any project emitting less than 70 Tons/year to be minor contributors. The AFRC/OMS project PM10 emissions are less than 10 percent of the Valley's emissions and are therefore considered regionally insignificant and de minimus based on current area emissions.

Water application is most often selected as a control measure to reduce fugitive dust emissions during construction projects. The effectiveness of watering to control emissions of fugitive dust depends on the frequency of water application. By watering twice a day, fugitive emissions can be reduced by approximately 50 percent (U.S. Environmental Protection Agency, 1985). Construction of the AFRC/OMS would include application of water twice per day to control fugitive emissions.

Construction related impacts on air quality would occur within a localized area and would only have short-term temporary impacts. Emissions would be mitigated through the use of control measures in accordance with standard construction practices. Trucks used for hauling fill material and site preparation would meet EPA vehicle emissions standards as required.

The potential CO emissions are directly a result of vehicle emissions generated by hauling and placement of the fill materials. Based on a five-year-old fleet of heavy duty diesel trucks with 50,000 miles, CO emissions are calculated to be 10.3 grams per mile. Based on a prior estimate of 28,888 vehicle miles, it is estimated that hauling of the 130,000 cubic yards of fill material from the borrow pit to the project site would generate 656 lbs of CO or

0.328 Tons. Conservatively, doubling this estimate to cover the placement and compaction would result in a projected CO emission level of 1,311 lbs or 0.656 Tons for the total project. This compares to a total annual CO emission level in the of 123,533 Tons per year for the Las Vegas Valley as reported in 1991 (Clark County Health Department). The CO emissions for the AFRC/OMS facility are therefore considered to be at *de minimus* levels for this project.

Long-term Impacts

Movement of the AFRC/OMS facility to Nellis AFB might require reservists to travel further to their Reserve Unit. It is estimated that the relocation of this facility will add 10-miles each way for all site visitors. A maximum of 45 full-time personnel would be expected to operate the facility on a daily basis. Based on a five-day work week, 48 weeks a year, an additional 108,000 miles could be driven by full-time personnel as a result of this move. Reservists visiting the facility on evenings, weekends, or for summer drills could add an additional 71,380 miles to this total, based on the individual reporting requirements for each Branch of the Service. Table 4-1 provides an estimate of the mileage traveled for each military organization. Adverse impacts of this nature can be significantly reduced by the use of car pooling.

Relocation of the AFRC/OMS would have some positive impacts to the air quality of southeastern Las Vegas area. Reduction of military personnel in the area would reduce traffic congestion during peak business hours (evenings and weekends), thereby decreasing vehicle air emissions. Further, those emissions generated by traveling the longer distance would be outside of the highest air pollution area, resulting in a slight improvement to air quality.

Military equipment operation is another area potentially impacting air emissions. The greatest potential source for air emissions is from vehicles in the U.S. Army's 257th Transportation Division. The major vehicle of consequence is the M1070 tractor used to pull

Table 4-1
AFRC/OMS Reserve Staff Mileage

Military Unit	Person Trips	Miles Traveled
U.S. Army	1,669	33,380
U.S. Navy	1,250	25,500
U.S. Marine Corps	650	13,000
		71,380

the M1000 trailer for tank transport. Known as a HET, and powered by a Detroit Diesel engine, 96 of these vehicles are assigned to this unit for operation and maintenance. Table 4-2 provides a list of engine emission rates and the current EPA Standards for each pollutant.

The HET vehicle exceeds the current (1994) EPA standards for NO_x and particulate emissions, with particulate emissions of particular concern in the Las Vegas area. The particulate emissions for these vehicles are approximately four times the EPA limits established for this vehicle. The NO_x emissions are almost twice the allowable limit, but the Department of the Army (DA) has an exemption for these vehicles. The limited operational usage of these vehicles for two hours per month would only produce approximately 238 GMs of NO_x.

Operations of these vehicles are allowed, however, as a result of a memorandum of understanding (MOU) established between the EPA and DA on October 4, 1988, representatives from the EPA and U.S. Army Tank and Automotive Command (TACOM) agreed to a National Security Exemption (NSE) for the DA Tactical Vehicle Fleet. The HET vehicle is a part of this fleet. The MOU allows the DA to procure the HET vehicles for Fiscal Years 1991 through 1995 under the EPA standards established for 1991 vehicles. The HET vehicle meets the 1991 standards.

The impact of emissions from these vehicles, although in some cases exceeding current EPA Standards, must be considered small, due to the limited operations of the vehicles and engines. It is anticipated that the greatest use of these vehicles would be during summer drill periods. Therefore, due to the limited and intermittent operation of these vehicles (less than two hours per week), air emissions impacts are considered to be less than significant.

4.1.2 Noise

Construction of the AFRC/OMS facility would create both short-term and long-term impacts as discussed below:

Short-term noise effects during construction would not produce long term affect on the

Table 4-2
Detroit Diesel 8V-92TA Engine Emissions*

Parameter	EPA Requirements**	Measured Emissions
Hydrocarbons	1.3	
Carbon monoxide	15.5	4.0
NO _x	5.0	
Particulates	0.1	

* GM/BPH-Hr

** EPA 1994 Standards

residents of Caffarelli Court or persons using the Family Campgrounds. However, as discussed in the long-term impacts section, both residents of Caffarelli Court and personnel using the Family Campground would be negatively impacted during Reserve operations involving the use of the HET vehicles.

Short-term Impacts

Noise levels for the short term would be expected to increase due to the use of heavy machinery and general construction activities although the noise levels would remain consistent with the areas' use. These increased noise levels are expected to be of short duration and limited to daytime, weekday hours. Due to the temporary nature of these noises, and the limited daytime, weekday occurrence, their impact is considered to be less than significant.

Long-term Impacts

The long-term noise impacts are considered to be of a greater concern due to the proximity of the proposed site to the Caffarelli Court Mobile Home Park and the recreation area (Family Campground) to the west. Caffarelli Court mobile homes are approximately 400 feet to the southwest of the proposed site at the nearest point. The Family Campground is slightly further away, but there are plans to expand the campground area closer to the AFRC/OMS facility. Peak activities for both the camp ground and AFRC/OMS occur on weekends.

The primary noise source of concern is the HET vehicle. The Detroit Diesel engine powering these vehicles produce intense noise levels of varying octaves. Personnel operating these vehicles normally wear hearing protection devises because of the noise levels generated. Initial calculations show noise generation levels, as they reach Caffarelli Court, to be close to or exceed noise limits for the area. Operations would normally be limited to daytime

hours.

Noise data for the HET vehicles range from 76 dBA at idle to 85 dBA at 1450 RPM to 99 dBA at the maximum noise level. Noise data was provided by OshKosh Truck Company.

Although noise generated from the HET vehicles individually might be acceptable, the U.S. Army has indicated that up to 24 HET vehicles would be operating at the same time.

Calculation of noise attenuation over distance may be calculated by two different methods: either as a point source or a line source. With the vehicles parked in a line, the sound wave could perform as a line generator with 24 HET vehicles running and act as a line generator for receptors close to the source. Twenty four HETs parked in a line would extend 250 feet across the line. Using 24 single sources generating 85 dBA acting as a line source is the equivalent of a single source generating 98 dBA. At a distance of 410 feet, this would equate to 78 dBA impacting Caffarelli Court at the closest point.

Calculating noise for a point source produces a lower dBA result, but calculations using either method, are very close to or exceed Clark County Noise Ordinance Standards (55 dBA maximum limit for night-time operations).

Discussions with Clark County Planning Commission representatives indicate that the County considers enforcement of County noise regulations at Nellis AFB beyond their limit of authority and not of their concern. Discussions with EPA however, indicated that President Carter signed Executive Order 12088 in 1978, entitled "Federal Compliance with Pollution Control Standards." This Executive Order states:

"The head of each Executive Agency is responsible for compliance with applicable pollution control standards, including those established pursuant to, but not limited

to the following:

The Noise Control Act of 1972 (42 U.S.C., 4900 et. seq.)."

Further, in June 1980, a Federal Interagency Committee on Urban Noise (FICUN), published "Guidelines for Considering Noise in Land Use Planning and Control. The Department of Defense was one of the primary Federal agencies participating in the Interagency Committee. This report defines suggested land use compatibility guidelines for various noise zone classifications and acceptable noise level limits for various uses. The FICUN report considers the location of mobile home parks or trailer courts in noise zones above $L_{dn}65$ as not compatible and should be prohibited.

The L_{dn} scale is the day-night sound level measurement and is the A-weighted equivalent sound level for a 24-hour period with an additional 10 dB weight imposed on the equivalent sound levels occurring during nighttime hours. Because of the limited number of operating vehicle hours, the HET vehicles will not exceed the L_{dn} values established for the trailer court.

Due to the sound intensity generated by the HET vehicles, the proximity of these vehicles to the Caffarelli Court mobile homes and the family camping area, and the fact that the sound levels impacting both areas could be close to or exceed the legal limits, the U. S. Army Corps of Engineers proposes to construct sound barriers along the western and southern perimeter of the proposed site. Current plans call for the construction of a block wall, approximately nine-feet high.

The U. S. Department of Transportation, Federal Highway Administration has developed standards for noise barrier design and published this information in the "Noise Barrier Design Handbook" (U. S. DOT, 1976). Effective design of noise barriers must include an evaluation of the height of the noise generator as well as the attenuation capabilities of the barrier materials. The DOT handbook calculates the noise attenuation or transmission loss factors for a cinder block wall (hollow core) to be 28 dBA when applied to a generalized truck noise spectrum.

Noise generated from the HET vehicles as it impacts Caffarelli Court with the sound attenuation wall could be reduced to 50 dBA (78 dBA -28 dBA) for a line source. These calculations are based on the fact that vehicles would be parked facing the cinder block wall, providing the greatest degree of protection for the Caffarelli Court and Family Campground areas.

The proposed sound wall will reduce noise impact levels to Caffarelli Court and the Family Campground areas. Reducing sound levels as they impact these areas to less than 55 dBA would be acceptable and would partially meet Clark County noise ordinances. Noise at the fence line of the AFRC/OMS could still exceed local standards.

4.1.3 Water

The potential impacts to water resources in the Las Vegas area as a result of implementing the proposed project are dependent upon the specific water resource selected. Potential impacts to surface water differ from the potential impact to groundwater or water usage. The following subsections will evaluate the potential impact to each water resource.

4.1.3.1 Stormwater

The proposed AFRC/OMS facility planned for Area III of Nellis AFB would be constructed similarly to the site conceptual design as illustrated in Figure 2-3. An integral part of the proposed design is the installation of two stormwater catchment basins along the northeastern and northwestern portion of the site. Surface water from the AFRC/OMS facility will drain into these basins and remove approximately 16.5 acre-feet of surface water runoff to the Las Vegas Wash. This should be considered a slightly beneficial impact to potentially reduce, by some small degree, area flooding that might result from surface

water runoff.

4.1.3.2 Groundwater

The construction of the proposed AFRC/OMS facility will require fresh water supplies for normal operations and fire suppression systems. No groundwater wells are planned for the proposed facility. At the present time, the U.S. Army Corps of Engineers proposes to use the City of North Las Vegas for domestic water supply and for maintaining minimal water pressures for fire flow requirements.

Water supplies for the City of North Las Vegas are partly derived from area groundwater wells. The proposed project would not be considered a new user of water resources. Water demands for the new facility should be of a similar requirement as the current AFRC facility. Therefore no significant impact to groundwater is expected.

4.1.3.3 Water Use

The AFRC/OMS facility could potentially impact water usage in the immediate area of Nellis AFB, depending on its ultimate source of fresh water. Although Nellis AFB does not exceed its allotment of 4,000 acre-feet of water per year, during the summer months it does exceed its maximum draw rate.

Water use can be divided into two categories; normal week day use and peak summer consumption. The normal week-day staff could total up to 65 persons for all Branches of the service. Water usage is a total of all water consumed, whether for drinking, personnel hygiene, or for cleaning purposes. It is estimated that each individual would use 70 gallons/day per person. Normal week-day usage could amount to a total of 4,550 gallons/day or 136,000 gallons/month.

Consumption of water should reach its peak during summer months when the maximum

number of Reservists would be in the area for summer drills. The U. S. Army Reserve activity could reach a peak of 233 Reservists, the U. S. Navy a peak of 260, and the U. S. Marine Corps a peak of 60. Although it is not anticipated that all units would be in the field at the same time, it is possible that the Marines could be in the field at the same time as one of the other Service organizations, bring the potential number of people in the field up to a maximum of 320. Using the same water usage factors of 70 gallons/person/day, an estimated that 22,400 gallons/day could be consumed. Since field operations are of a limited duration (normally less than two weeks), it is calculated that a total of 313,600 gallons of water could be consumed over the two-week period.

Current designs call for water to be supplied by the City of North Las Vegas. The proposed AFRC/OMS facility would tie into existing potable water pipelines south of the proposed site. This would allow for construction of the proposed facility without the need to install a water storage/pressure systems to ensure that fire flow pressure to existing users is maintained. Regardless of which source is selected to supply water, the construction and operation of the proposed facility is not considered a new water user in the Valley. Existing personnel working in the AFRC/OMS facility should consume similar amounts of water when relocated to the proposed Nellis AFB location, therefore there is no significant impact.

4.1.3.4 Waste water

The proposed AFRC/OMS plans to tie into an existing Clark County sanitary sewer system in the Nellis AFB area. Currently, two alternatives exist for the tie in. Proposal No. 1 calls for installation of a new 8-inch pipeline running 4,200 feet to the south and tieing into the existing system just to the north of Las Vegas Boulevard. A second proposal calls for construction of a 6-inch pipeline, running 1,400 feet to the east. Construction of either pipeline would have no impact on area cultural or biological resources.

For surface water run off, the proposed AFRC/OMS would submit a NOI, prepare a stormwater pollution prevention plan, and pay appropriate fees at least two days prior to

start of construction as a part of its efforts to obtain a NPDES permit.

An oil/water separator would be installed at the proposed AFRC/OMS facility to collect and process contaminated water collected on site. Specific criteria have been developed by Nellis AFB for the incorporation and usage of oil/water separators on site and the AFRC/OMS must meet these requirements. Operation and maintenance of an oil/water separator system in accordance to Nellis AFB standards should create no adverse environmental impacts. Therefore the potential impact to waste water are considered insignificant.

4.1.4 Biology

The proposed AFRC/OMS facility will remove approximately 16.5 acres of land for use by area animals. The site will be dominated by three buildings and a parking area for military vehicles and personal vehicles. The site is already heavily disturbed by the previous removal of approximately six-feet of soil/fill materials for the construction of the nearby Nellis Federal Hospital. The site is mostly void of any vegetation, except along the site's perimeter. As a result, the construction of the proposed facility is considered to have no significant impact on area plants or wildlife.

A wetlands evaluation of the proposed site was completed in accordance with the *Federal Manual for Identifying and Delineating Jurisdictional Wetlands* (referred to as the federal manual). According to the federal manual, three criteria must be met before an area can be identified as a wetland:

- Hydrophytic vegetation
- Hydric soils
- Wetland hydrology.

None of these conditions are encountered at the proposed site, therefore no wetland impact is possible.

4.1.5 Land Use

Area land use near the proposed Nellis AFRC/OMS is considered to be a mix of residential, recreational, and industrial use with the presence of mobile homes, family campground, fuel storage tanks, auto wrecking and salvage operations, railroad spurs, and other military operations nearby.

The Department of Defense and Nellis AFB policy for land use guidance is based on DOD Instruction 4165.57 (1977), which outlines Air Compatibility Use Zones (AICUZ). Each military service has an AICUZ program to investigate, describe, and study noise exposure and land use at all DOD air installations. An AICUZ exists for Nellis AFB. The AICUZ studies for each installation are prepared and given to the public and local, regional, state, and other federal agencies in their land use planning/control. Suggested land use compatibility guidelines state that mobile home parks or trailer courts should not be located in noise zones where the L_{dn} level exceeds 65 dB. Although the proposed project does not exceed the L_{dn} limits for a 24-hour period, daytime sound levels as they impact Caffarelli Court could approach this sound level.

Further, Nellis AFB maintains a Base Comprehensive Plan (1991), designed to maintain the quality of life for Air Force personnel. Development of the proposed site as an AFRC/OMS facility could potentially adversely impact the social/psychological condition of Base personnel faced with excessive noise. If noise levels were to exceed the L_{dn} levels established by the U. S. Air Force for mobile home parks, significant impacts could result.

4.1.6 Traffic

Traffic impacts as a result of implementing the proposed project would remove motor vehicles from the current AFRC/OMS facility on Sahara Blvd. With the major Reserve activity occurring at night and on weekends, Reservists must share road space and limited street parking with area merchants and customers.

Movement of the AFRC/OMS facility to Nellis AFB would increase Nellis area traffic, but predominantly during periods of the day when the roads are not congested. Week day evening meetings would bring Reservists to the Nellis AFB area at a time of day when most traffic is moving in the opposite direction. Week end meetings would bring Reservists to the area in early morning, another period of time with low traffic volumes.

Relocation of the AFRC/OMS to the Nellis AFB area would slightly improve traffic and parking congestion in the immediate area of Sahara Avenue.

4.1.7 Cultural Resources

As stated previously, the proposed site for the AFRC/OMS is heavily disturbed as a result of excavation of approximately six-feet of soil/fill material over most of the site. Because of this heavy disturbance, no cultural resources exist on the site. Search of archaeological records at the Museum of Natural History, University of Nevada, Las Vegas, indicates no cultural resources at the proposed site. Based on this information, and the general lack of cultural resources in the area, the construction of the proposed project is considered to have no significant impact on cultural resources.

4.1.8 Hazardous Materials Management

As discussed in Section 2.1, Proposed Action, The U.S. Army Reserve and the U.S. Marine Reserve units would be conducting a wide range of heavy vehicle maintenance operations and training as a major part of their mission. Limited quantities of hazardous materials, motor and lubricating oils, and other controlled substances would be required as a part of normal vehicle maintenance, operation and training.

Changing oil in vehicles at this new facility would create the greatest amount of waste. Oil changes are only conducted when laboratory testing indicates that an oil change is needed.

Based on past experience with the HET vehicle, equipped with the Detroit Diesel engine, approximately one 55-gallon drum of waste oil would be generated every 90 days. A hazardous materials (HazMat) storage area would be built as a part of this new facility with the Army planning to store their own materials. The Army would not transport waste but would utilize Nellis AFB systems for removal of wastes. Table 4-3 provides a list of materials normally expected to be stockpiled in limited quantities at a military operations and maintenance shop.

The U.S. Navy has no current plans for generating any hazardous materials on site. The Reserve unit is considered a zero hazardous materials generator and has only two vehicles: a pickup truck and a van. These vehicles are taken out for servicing. No service training is a part of this Reserve contingent. No storage space has been identified for hazardous materials.

The U.S. Marine Corps would conduct operations similar to those planned by the U.S. Army, but on a smaller scale. The Reserve unit would perform normal vehicle maintenance at the Reserve Center, including oil changes, lubrication, and battery service. No painting or body work would be planned for this facility.

Limited quantities of oil, lubricants, and batteries would be stored on site, utilizing the same storage area as the Army. The Marines estimate that their waste generation rate would be approximately one-third that of the Army, or approximately 18-20 gallons every 90 days. Plans for waste disposal are not finalized, but the Marines would most likely dispose of wastes via the existing Nellis AFB system.

Since the proposed AFRC/OMS facility would be located on Nellis AFB property, USAF environmental guidelines serve as the foundation for the operation and control of facilities using hazardous materials. In the event that U.S. Army or U.S. Marine Corps regulations impose more stringent controls on the management of hazardous materials, the more stringent regulations would be put into effect and Nellis AFB regulations would be met.

Table 4-3
Hazardous and Controlled Materials
AFRC/OMS

- a. Aerosol Spray Paint**
- b. Antifreeze**
- c. Batteries**
- d. Brake Fluid**
- e. Diesel Fuel**
- f. Freon**
- g. Gunk Engine Brite**
- h. Hydraulic Fluid**
- i. Lubricating Oils**
- j. Motor Oil**
- k. Safety Kleen Solvent**
- l. Starting Fluid**

For the purpose of controlling hazardous materials, Nellis AFB has developed a plan for managing substances falling under this classification. Known as the "Nellis Air Force Base Plan 12 - Hazardous Waste Management" or NAFB Plan 12, the plan provides guidance and assigns responsibility for proper transport, handling, turn-in procedures and storage of wastes. This document outlines the procedures for the Base to comply with the hazardous waste management provisions of RCRA and applicable state statutes contained in Nevada State Assembly Bill No. 196, 19 February 81, et seq. Sub-divided into Site-specific contingency plans, OMS functions are covered under several categories. The OMS would be guided by the contingency plans for: Wheel and Tire Shop (Annex II-4), Auto Craft (Annex II-17), Vehicle Maintenance Shop (Annex II-34), and Transportation (Annex II-44).

The NAFB Plan 12 provides a comprehensive management plan for the total control of hazardous materials from their arrival on-site to their ultimate disposal. The plan identifies waste generators, initial accumulation points, accumulation sites, and disposal practices. Packaging, labeling, and record keeping are an integral part of waste management. A waste minimization program is also a part of NAFB Plan 12.

Based on the guidelines presented in NAFB Plan 12, and its function as the baseline control for the management of hazardous materials, use of limited quantities of hazardous materials at the AFRC/OMS facility should have no significant impact to the environment.

4.1.9 Hazardous Waste Management

Because of the highly developed waste management system developed at Nellis AFB, the limited quantities of hazardous waste expected to be generated at the AFRC/OMS facility, it is fully expected that the facility will tie directly into Base operations. This includes: requisitioning all hazardous materials from the Base HAZMART, entry of all hazardous materials into the Base hazardous materials database management system, and utilizing existing Base systems for the tracking and disposal of all hazardous waste.

4.2 Alternative No. 1

Alternative No. 1 to the proposed action would be to build a new AFRC/OMS facility on a smaller 10-acre parcel of land at the same intersection of Range Road and DRMO Road. The potential impact for this alternative are presented below.

4.2.1 Air Quality

Short-term Impacts

Construction of this alternative to the proposed action would create similar impacts as the proposed project. Fill material would be required due to the need to back fill the entire 10-acre site. It is estimated that this would require the transport of approximately 96,000 cubic yards of fill material. Additional construction activities related to the relocation of the two fresh water pipelines would create additional PM₁₀ and CO emissions. The emissions of PM₁₀ and CO are still of primary concern, but are slightly less (10.0 Tons for PM₁₀ and 0.5 Tons for CO) than the proposed action.

The PM₁₀ emissions would still be controlled by the application of water during the construction project. Carbon monoxide emissions would be controlled by the use of vehicles meeting EPA requirements of heavy duty trucks.

Long-term Impacts

Movement of the AFRC/OMS facility to the alternate site would have identical impacts as the proposed action. Permanent staff members would still be required to travel the extra distance (estimated to be 20-miles round-trip) and drive the same number of additional miles. Reservists would also be required to drive the same additional miles as the permanent staff. Table 4-1 provides an estimate of the mileage traveled by each military organization. Air quality in the southeast Las Vegas area would improve slightly as a result of this action.

the same as for the proposed action.. Operation of the military equipment assigned to the alternate site would be identical to the proposed action, therefore the air quality impact would be identical.

Air quality impact as a result of selecting Alternative No. 1 as the site for the AFRC/OMS facility would have no significant impact.

4.2.2 Noise

Short-term Impacts

Short-term noise levels would be expected to rise sharply, similar to the proposed action, as a result of heavy machinery and general construction activities. These increased noise levels would be of short duration and normally limited to daytime, weekday hours. Since the location of Alternative No. 1 would be further away from the Caffarelli Court mobile homes and the Family camp grounds, the noise levels reaching this area would be slightly reduced. In addition, the Camp ground's heaviest use is on week ends when normally little or no construction activity occurs. The short-term noise impacts would be considered less than significant.

Long-term Impacts

Long-term noise impacts from Alternative No. 1 would be slightly less than at the proposed project site. The HET vehicles would be parked slightly further from the mobile homes in Caffarelli Court and the family campgrounds which would serve to further attenuate the noise intensity impact on the residents (mobile homes) and campground visitors to the area. The Nellis AFB has already approved the expansion of the Family Campground area to the east. Expansion in this direction would bring the campground closer to the proposed AFRC/OMS resulting in an increased negative impact to this area.

It is estimated that the sound intensity at the camp ground would still be around 50 dB and the same attenuation measures presented for the proposed action to reduce potential impact should also be implemented for Alternative No. 1. The potential noise impact to the camp ground as a result of planned expansion would increase the sound level for this area. Implementation of noise barriers would definitely reduce the impact on the camp ground area, but noise levels could still be an annoyance.

4.2.3 Water

Construction of an AFRC/OMS at the alternative site impacts water differently for one water parameter than the proposed action.

4.2.3.1 Surface Water

The Alternative No. 1 site is considerably more compressed than the preferred action alternative and requires some modification in facility design. Space limitations eliminate the large retention ponds visible at the front of the preferred site thereby increasing the potential for flash flooding in the area. Although this is not considered a significant impact to surface water, the proposed design for the alternative site can not be considered a beneficial impact. Construction of this alternative would have no significant impact on surface water.

4.2.3.2 Groundwater

The construction of the project at the alternative site would have the identical impact as the proposed action. The impact to the area groundwater would remain as stated under the proposed action. No significant impact would be expected to the groundwater.

4.2.3.3 Water Use

The impacts on water use of constructing the alternative to the proposed action would be the

same as for the proposed action. It would still be proposed that water would be supplied by the City of North Las Vegas. The quantity of water used would remain the same and the requirement to maintain pipeline water pressure would still be required.

4.2.4 Biology

Alternative No. 1 to the proposed action would impact only 10 acres rather than the 30 acres of the proposed action. Although the area is highly disturbed, impacting the smaller area would create even less of an impact than the proposed action. Construction of this alternative would have no significant impact on area plant or wildlife.

4.2.5 Land Use

Area land use for Alternative No. 1 is identical to the proposed project site. Confining the AFRC/OMS facility to a 10-acre parcel would place the Reserve facility further from the Caffarelli Court mobile home park thereby reducing the potential adverse land use in the area. Plans have already been approved however, to expand the Family Campground to the east, which would place the camp ground closer to the Reserve center and adversely impact weekend campers in the area. The potential impact to the camp ground is further accentuated by the fact that Reserve activities occur at the same time that the camp ground usage is at its peak, and the sound attenuation for recreational vehicles and tent campers leaves much to be desired. Development of Alternative No. 1 could have the same potential impact as the proposed action. Development of the site could be a significant adverse impact on area campers.

4.2.6 Traffic

Traffic impacts as a result of implementing Alternative No. 1 to the proposed action would have the identical impact as the proposed project. Traffic impacts to the southeast Las Vegas area would improve slightly as a result of decreased military personnel in the area during

peak visitor times (evenings and weekends). This alternative would increase traffic in the Nellis AFB area, but predominantly during the periods of the day when the roads are not congested. The impacts of Alternative No. 1 would be the same as the proposed action and should be considered a slightly positive impact to the southeastern Las Vegas area and of no significance to Nellis AFB.

4.2.7 Cultural Resources

The potential impacts to cultural resources as a result of implementing Alternative No. 1 would have similar impacts as the proposed action. The prior removal of six-feet of soil/fill material from the site, no record of archaeological resources in the Museum of Natural History for the site or in the immediate area, indicate that construction of Alternative No. 1 is considered to have no significant impact on cultural resources.

4.2.8 Hazardous Materials Management

Hazardous materials management under Alternative No. 1 would be identical as for the proposed action. The AFRC personnel at the site would follow the Nellis AFB Plan 12 for the management of hazardous materials, identical to the procedures imposed at the proposed site. The impact as a result of using hazardous materials should not be a significant impact.

4.2.9 Hazardous Waste Management

The hazardous waste management practices for this alternative would be the same as for the proposed action. By following Base procedures for the purchase, tracking, and disposal of hazardous wastes, there should be no impact on the environment.

4.3 Alternative No. 2

Alternative No. 2 to the proposed action would be to build a new AFRC/OMS facility of approximately 16.5 acres spanning both sides of DRMO Road. The AFRC training facility would be constructed identical to the proposed action at the intersection of DRMO Road and Range Road, on the south side of DRMO Road. The site would occupy approximately 10 acres and would consist of a 68,619 SF two -story training facility having a footprint of approximately 42,000 SF and a 1,152 SF unheated storage facility. A 9,142 SY area for POV parking would also be a part of this site.

The OMS and MEP facilities would be constructed on 6.5 acres north of DRMO Road on land between Range Road and the railroad tracks to the west. The maintenance building would consist of approximately 14,755 SF and the MEP area approximately 15,607 SY. These facilities would be designed to house the same number of vehicles, equipment, and operating facilities as the proposed action.

4.3.1 Air Quality

Short-term Impacts

Construction of Alternative No. 2 would create similar short-term impacts to air quality as the proposed project. The same amount of fill materials would be required utilizing the same type and amount of construction equipment. The PM₁₀ and CO emissions are still of primary concern and are of the same level of significance as the proposed action.

PM₁₀ emissions would still be controlled by application of water twice each day during the construction project. Carbon monoxide would be controlled by the use of vehicles meeting EPA requirements for heavy duty trucks.

Long-term Impacts

Movement of the AFRC/OMS facility to this alternative site would have identical impacts as the proposed action. Permanent staff members would still be required to travel the extra distance (estimated to be 20-miles round-trip) and drive the same number of additional miles. Reservists would also be required to drive the same additional miles as permanent staff. Table 4-1 provides an estimate of the mileage traveled by each military organization. Air quality in southeast Las Vegas would improve slightly as a result of this action.

Operation of the military equipment assigned to the site would be identical to the proposed action, therefore the air quality impact would be identical.

Air quality impacts as a result of selecting Alternative No. 2 as the site for the AFRC/OMS facility would have no significant impact.

4.3.2 Noise

Short-term Impacts

Short-term noise levels would be expected to rise sharply, identical to the proposed action. This as a result of heavy machinery and general construction activities at the AFRC facility. These increased noise levels would be of short duration and normally limited to daytime, weekday hours. The construction of the new OMS and MEP facilities would have a lesser impact on the residents of Caffarelli Court and the Family Campgrounds, since the site is approximately 1,500 - 2,000 feet further from inhabited areas. In addition, the Campgrounds heaviest use is on week ends when normally little or no construction activity occurs. The short-term noise impacts would be considered less than for the proposed action.

Long-term Impacts

Long-term noise impacts from Alternative No. 2 would be less than the proposed project site due to maintenance operations being further removed from inhabited areas. The HET vehicles would be parked and maintained north of DRMO Road, approximately 1,500 - 2,000 feet from the Family Campground and Caffarelli Court. This would serve to further attenuate the noise intensity as it would impact on the residents and campground visitors to the area.

It is estimated that the sound intensity at the Campground would be around 35 - 42 dB depending on the location of the operating HETs. Selection of this alternative would reduce the noise in the inhabited areas and potentially reduce the need for noise attenuation measures.

4.3.3 Water

Construction of Alternative No. 2 would have the same impact to water as for the proposed action.

4.3.3.1 Surface water

Alternative No. 2 creates the same impacts for the AFRC facility as the proposed action. The same retention ponds will be built with the same degree of runoff expected. Similarly, construction of the new OMS facility north of DRMO Road will have the same impacts as construction of this facility south of DRMO Road. Construction of this alternative would have no significant impact on surface water.

4.3.3.2 Groundwater

The construction of this alternative would have the identical impact as the proposed action.

The impact to the area groundwater would remain as stated under the proposed action. No significant impacts would be expected to the groundwater.

4.3.3.3 Water Use

The impacts on water use for Alternative No. 2 would be the same as for the proposed action. It would still be proposed that water would be supplied by the City of North Las Vegas. The quantity of water used would remain the same and the requirement to maintain pipeline pressure would still be required.

4.3.3.4 Waste water

Alternative No. 2 would have the same impacts to waste water as the proposed action. The same permit applications, pollution prevention plans, and permit fees would be required for this alternative. No additional area would be disturbed for connection to sewer pipelines as the proposed action. No impacts would result from this action.

4.3.4 Biology

Alternative No. 2 to the proposed action would have similar impacts to the proposed action. Construction of the new AFRC facility south of DRMO Road would be identical to the proposed action. The area is highly disturbed and contains little vegetation. No species of concern are found on this site. Construction of the new OMS facility north of DRMO Road will have no impact on protected species of plants or animals. The site contains a few creosote bushes and saltbushes, neither of which are protected nor of special value. Construction of the OMS facility on this site will have no significant impact.

4.3.5 Land Use

Land use in the area north of DRMO Road is classified as industrial and readily visible by

the lack of residential or recreation areas. North of the site are industrial facilities including: auto wrecking and salvage operations, railroad spurs, and other military operations. Fuel storage tanks are to the east. Development of Alternative No. 2 would have less impact than the proposed action, making the project overall more compatible with the Nellis Base Comprehensive Plan and existing area land use. Development of the site would not be a significant impact.

4.3.6 Traffic

Traffic impacts as a result of implementing Alternative No. 2 to the proposed action would have the identical impact as the proposed project. Traffic impacts to the southeastern Las Vegas area would improve slightly as a result of decreased military personnel in the area during the peak visitor times (evenings and weekends). This alternative would increase traffic in the Nellis AFB area, but predominantly during periods of the day when the roads are not congested. The impacts of Alternative No. 2 would be the same as the proposed action and should be considered as a slightly positive impact to the southeastern Las Vegas area and of no significance to the Nellis AFB area.

4.3.7 Cultural Resources

The potential impacts to cultural resources as a result of implementing Alternative No. 2 would have similar impacts as the proposed action. The site for the OMS facility also shows no cultural resources present. The prior removal of six-feet of soil/fill material from the site, no record of archaeological resources in the Museum of Natural History for the site or in the immediate area, indicate that construction of Alternative No. 2 is considered to have no significant impact on cultural resources.

4.3.8 Hazardous Materials Management

Hazardous materials management under Alternative No. 2 would be identical as for the

proposed action. The AFRC personnel at the site would follow the Nellis AFB Plan 12 for the management of hazardous materials, identical to the procedures imposed at the proposed site. The impact as a result of using hazardous materials should not be a significant impact.

Hazardous Waste Management

The hazardous waste management practices for this alternative would be the same as for the proposed action. By following Base procedures for the purchase, tracking, and disposal of hazardous wastes, there should be no impact on the environment.

No Action

Under the no action alternative, the U.S. Army Reserve, the U.S. Navy Reserve, and the U.S. Marine Corps Reserve would continue to use the same facilities in downtown Las Vegas (Taylor Street) as they are currently using. Overcrowding conditions would continue to exist, further contributing to the overcrowding at the AFRC and negatively impacting parking and traffic conditions in downtown Las Vegas. Further, the no action alternative would be contrary to the mission of the U.S. Army and U. S. Marine Corps to form two new service units within the complex.

4.4.1 Air Quality

Short-term Impacts

The no action alternative would eliminate the construction of the new AFRC/OMS facilities, thereby eliminating the short-term impacts to air quality resulting from construction. The PM₁₀ emissions from construction would not be present nor the CO emissions from heavy equipment operations. There would be no impacts to short-term air quality as a result of no action.

Long-term Impacts

The no action alternative would have the effect of increasing air emissions in the Las Vegas area as a result of the AFRC/OMS presence at the southeastern city limits. The population explosion in the area and increased tourism continue to adversely impact traffic congestion in the area, forcing vehicles to idle longer and increase the resultant pollutants to the air. The no action alternative would continue to adversely impact air quality in the city limits for all priority pollutants, with the possible exception of PM₁₀. Continued operation of the AFRC/OMS facility in southeastern Las Vegas is considered as an adverse impact to air quality.

4.4.2 Noise

Short-term

The no action alternative would eliminate the short term noise impact created as a result of constructing the new AFRC/OMS facility at Nellis AFB. No heavy truck equipment would enter the area with back fill materials and no construction noises would be created.

Long-Term

Under the no action alternative, no HET vehicles would be relocated to the Nellis AFB area and there would be no long-term noise impacts to the nearby Caffarelli Court mobile homes or Family Camp ground.

4.4.3 Water

The no action alternative would totally eliminate any impact to the groundwater or water use in the immediate area of Nellis AFB. The same amount of water would still be consumed, only at the Taylor Street facility.

Potential flooding as a result of surface water runoff would not be reduced in any manner, therefore this would be considered a negative impact.

4.4.4 Biology

Elimination of the proposed AFRC/OMS in Area III would totally eliminate any construction related to the planned facility and leave 30-acres for native plants and wildlife. Due to the previous site excavation, the development of the site as a natural habitat is quite limited.

4.4.5 Land Use

The no action alternative will have no impact on land use. The site would remain available for future development, most likely for development as an industrial site.

4.4.6 Traffic

The no action alternative would have a negative impact on overall traffic in the Las Vegas area. Congestion would continue to increase within the Las Vegas city limits, contributing to traffic delays and air pollution. No impact would occur in the area of Nellis AFB.

4.4.7 Cultural Resources

The no action alternative would have no impact on cultural resources since no activity would occur at the Nellis AFB site.

4.4.8 Hazardous Materials Management

Hazardous materials management under the no action alternative would continue in the same manner as is currently conducted by the AFRC/OMS in accordance with Army and Marine Corps requirements.

4.4.9 Hazardous Waste Management

Hazardous waste management under the no action alternative would continue in the same manner as is currently conducted by the AFRC/OMS facility in accordance with Army and Marine Corps requirements.

5.0 CONSULTATION AND COORDINATION

1. Mr. John Allison, U. S. Army Corps of Engineers, Louisville, KY.
2. Mr. Bob Armstrong, U. S. Department of Transportation, Washington, D. C.
3. Mr. Dan Binder, OshKosh Truck Company, OshKosh, WI.
4. Mr. Mark Cutler, U. S. Army Reserves, Los Angeles, CA.
5. Mr. L. R. Ernce, U. S. Marine Corps, New Orleans, LA.
6. Mr. Ken Feith, U. S. Environmental protection Agency, Washington, D. C.
7. Lt. Cmdr. Eric Friend, U. S. Navy Reserve, Los Alamitos, CA.
8. Mr. Fred Grant, U. S. Army Corps of Engineers, Louisville, KY.
9. Lt. Cmdr. Chuck Heron, U. S. Navy, Los Alamitos, CA.
10. Mr. Jeffrey Jacquot, Clark County Comprehensive Planning, Las Vegas, NV.
11. Mr. John Korkosz, Clark County Comprehensive Planning, Las Vegas, NV.
12. S.Sgt. Dean Lungo, 554 Transportation Unit, Nellis AFB, NV.
13. Sgt. Earl Mobley, Armed Forces Reserve Center, Las Vegas, NV.
14. Mr. Harry Nagao, U. S. Navy, New Orleans, LA.
15. Mr. Kenneth Nimmer, Nellis AFB, NV.
16. Lt. Col. Reagan, U. S. Marines, New Orleans, LA.
17. Ms. Carrie Ross, U.S. Army, Los Alamitos, CA.
18. Mr. Phil Rosenquist, Clark County Comprehensive Planning, Las Vegas, NV.
19. Mr. Roy Soffe, Clark County Health District, Air Pollution Control District, Las Vegas, NV.
20. Chief Charles Wallace, 554 Transportation Unit, Nellis AFB, NV.
21. Mr. John Wardlaw, Clark County Comprehensive Planning, Clark County, NV.

6.0 LIST OF PREPARERS

- 1. Arvind Archaya, Geotechnical**
- 2. Chuck Burt, Wetlands**
- 3. Emily Dyson, Editing**
- 4. Michael Greenspan, Stormwater**
- 5. Hank Khan, Air Quality/Traffic**
- 6. Brian Oatman, Water/General Support**
- 7. Susan Schaffer, Permitting**
- 8. Bill Taber, Project Manager/Biology**
- 9. Paul Warbington, Noise/Engineering**

7.0 REFERENCES

1. Base Wide Site Drainage Study, Final Study Level, Nellis Air Force Base, Nevada. Prepared by Dames & Moore, 1992.
2. Clark County Health District, Las Vegas, NV, Annual Report, 1993
3. Engineering Feasibility Study for Armed Forces Reserve Center/Organizational Maintenance Shop at Nellis Air Force Base, prepared by Dames & Moore, January 1995.
4. Giancoli, Douglas C., "Physics, Principles with Application", Third Edition, Prentice Hall, Englewood Cliffs, N. J., 1992
5. Golf Course Renovation and Expansion Draft Environmental Assessment, January, 1995. Prepared by Environmental Directorate, Nellis AFB, NV.
6. Guidelines for Considering Noise in Land Use Planning and Control, 1980. Published by the Federal Interagency Committee on Urban Noise.
7. Installation Restoration Program Records Search for Nellis AFB, April, 1982. Prepared by CH₂MHill Southeast, Inc. Gainsville, FL.
8. Installation of Jet Fuel Storage Tanks Final Environmental Assessment, June, 1994. Prepared by Science Applications International Corporation.
9. Nellis Air Force Base Comprehensive Plan, Las Vegas, NV. May, 1991. Prepared by GRW Engineers, Inc., Lexington, Kentucky. (GRW Report No. 1681
10. Nellis Air Force Base Planning For the 21st Century, 1991
11. Nellis Air Force Base Plan 12, Hazardous Materials Management Procedures, January 1995.
12. Nevada Department of Transportation (NDOT), Annual Traffic Report, 1993
13. U. S. Air Force, 1995, "Handbook to Environmental Quality", Directorate of Environmental Quality, HQ USAF/CEV, Washington, D. C.
14. U. S. Department of Transportation, 1976, Federal Highway Administration, Noise Barrier Design Handbook, FHWA-RD-76-58.
15. U. S. Environmental Protection Agency, (AP-42), Compilation of Air Pollutant

Emission Factors, Volume Stationary Point and Area Sources, Fourth Edition,
September 1985

**RESPONSES TO COMMENTS FOR THE
ENVIRONMENTAL ASSESSMENT
FOR THE PROPOSED
ARMED FORCES RESERVE CENTER/
ORGANIZATIONAL MAINTENANCE CENTER
AT
NELLIS AIR FORCE BASE**

DATED DECEMBER 1995